

MARCH 21, 1936

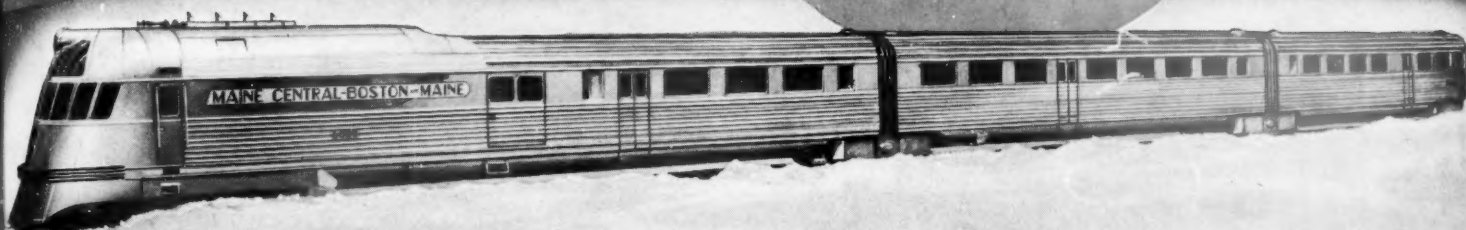
MAR 24 1936

# Railway Age

Founded in 1856

*What makes  
them Go-*

**EMC  
DIESEL  
POWER**



TRANSPORTATION LIBRARY

Boston and Maine-Maine Central "*Flying Yankee*"—the first streamlined train on any Eastern railroad—celebrates its first birthday. Congratulations! "On Time" daily through winter blizzards as under summer sun—Over 250,000 miles of service—Boston-Portland-Bangor—726 miles each week day—over 95% availability. Such outstanding performance recovers passenger travel and increases revenues.



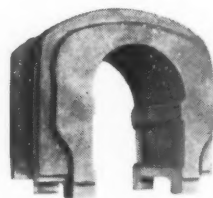
**ELECTRO-MOTIVE CORPORATION**  
LA GRANGE, ILLINOIS, U.S.A.

# HYLASTIC

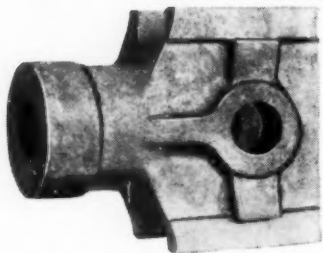
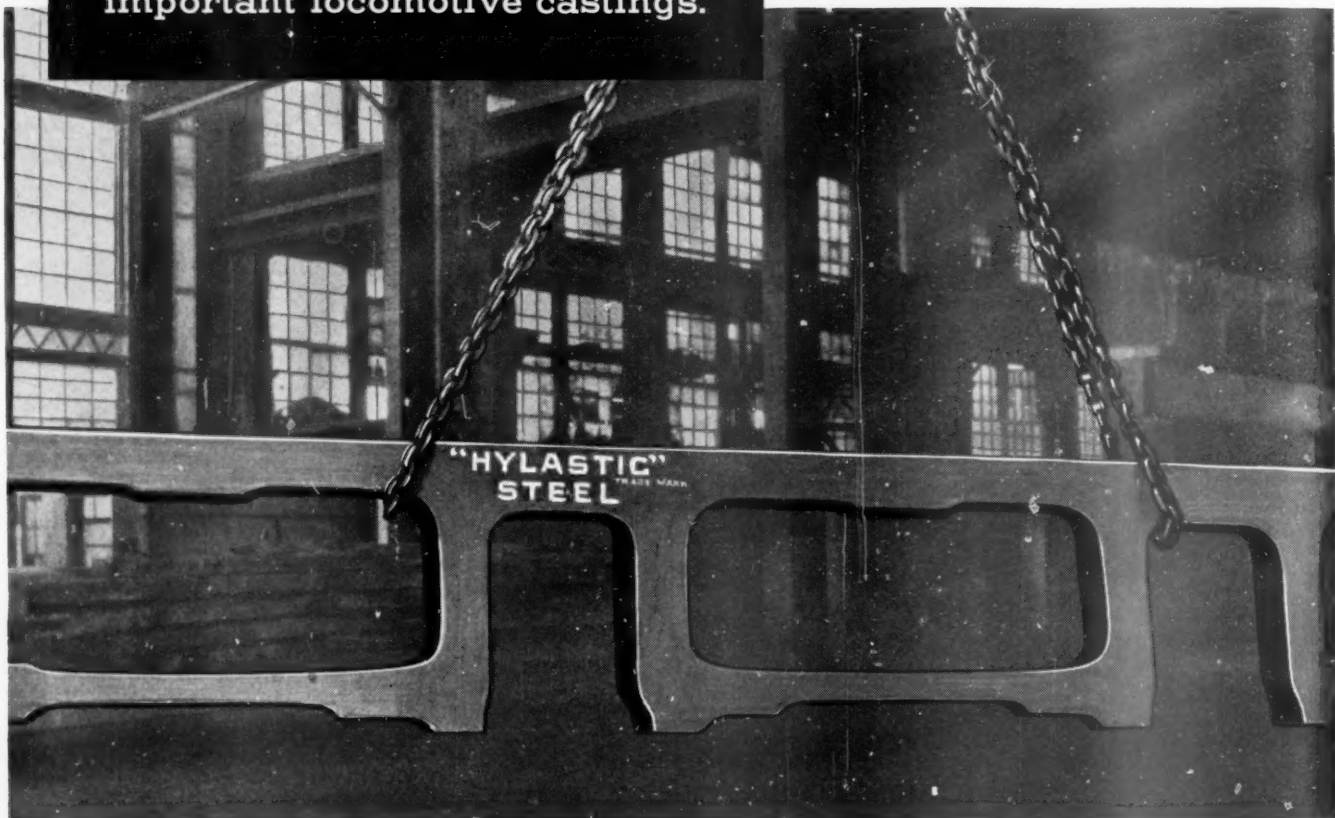
REG. U. S. PAT. OFF.

*American Steel Foundries  
High Tensile Cast Steel*

The toughness and shock resisting qualities of "HYLASTIC" Steel is inherent; it defies sudden fracture. "HYLASTIC" Steel is the strongest and longest lasting material for all important locomotive castings.



LOCOMOTIVE DRIVING BOX



LOCOMOTIVE CROSS HEAD

## AMERICAN STEEL FOUNDRIES

NEW YORK

CHICAGO

ST. LOUIS

# Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 100

March 21, 1936

No. 12

Published every Saturday by the  
Simmons-Boardman Publishing  
Company, 1309 Noble Street,  
Philadelphia, Pa., with editorial  
and executive offices: 30 Church  
Street, New York, N. Y., and 105  
West Adams Street, Chicago, Ill.

SAMUEL O. DUNN, *Chairman of Board*  
HENRY LEE, *President*  
LUCIUS B. SHERMAN, *Vice-Pres.*  
CECIL R. MILLS, *Vice-Pres.*  
ROY V. WRIGHT, *Vice-Pres. and Sec.*  
FREDERICK H. THOMPSON, *Vice-Pres.*  
ELMER T. HOWSON, *Vice-Pres.*  
F. C. KOCH, *Vice-Pres.*  
JOHN T. DEMOTT, *Treas.*

CLEVELAND  
Terminal Tower

WASHINGTON  
832 National Press Building

SAN FRANCISCO  
55 New Montgomery St.

## Editorial Staff

SAMUEL O. DUNN, *Editor*  
ROY V. WRIGHT, *Managing Editor*  
ELMER T. HOWSON, *Western Editor*  
H. F. LANE, *Washington Editor*

B. B. ADAMS  
C. B. PECK  
W. S. LACHER  
ALFRED G. OEHLE  
F. W. KRAEGER  
E. L. WOODWARD  
J. G. LYNE  
J. H. DUNN  
D. A. STEEL  
R. A. DOSTER  
H. C. WILCOX  
NEAL D. HOWARD  
CHARLES LAYNG  
GEORGE E. BOYD  
WALTER J. TAFT  
M. H. DICK

The Railway Age is a member of  
the Associated Business Papers (A.  
B. P.) and of the Audit Bureau of  
Circulations (A. B. C.).

Subscriptions, including 52 regular  
weekly issues, payable in advance  
and postage free; United States and  
possessions, and Canada, 1 year  
\$6.00, 2 years \$10.00; foreign coun-  
tries, 1 year \$8.00, 2 years \$14.00.

Single copies, 25 cents each.

## In This Issue

### Railroad Marine Operations in New York Harbor.....Page 496

A report of the March 20 meeting of the New York Railroad Club on the  
program for which railroad marine departments co-operated to present complete  
information on floating, lighterage and ferry services.

### Can Boiler Explosions Due to Low Water Be Prevented?..... 499

Frank Russell, mechanical engineer of the Southern Pacific, presents a dis-  
cussion of the protection afforded by the multiple application of boiler drop  
plugs in crown sheets.

### Is an "Outside" Trustee Needed?..... 501

Cassius M. Clay, counsel for the Railroad Division, R.F.C. argues that a  
disinterested independent would justify capable management in the public  
mind and insure effective reorganization.

## EDITORIALS

"Convenience and Necessity" of Tax Expenditures for Transport.....	493
Revenues Rise More Rapidly Than Car Loadings.....	494
Engineering Research .....	495

## GENERAL ARTICLES

Railroad Marine Operations in New York Harbor.....	496
Can Boiler Explosions Due to Low Water Be Prevented? by Frank Russell.....	499
Is an "Outside" Trustee Needed? by Cassius M. Clay.....	501
Repeaters Improve Train Dispatching.....	503
New Opportunities, by Ralph Budd.....	505
Freight Car Loading.....	507
Floods in East Cause Widespread Damage to Rail Lines.....	508

## COMMUNICATIONS AND BOOKS..... 510

## ODDS AND ENDS..... 511

## NEWS..... 512

The Railway Age is indexed by the Industrial Arts Index and also by the  
Engineering Index Service



## WHAT REPUBLIC CAN CONTRIBUTE To Your New Locomotives

Modern materials developed by Republic metallurgists afford the opportunity of reducing weight and improving efficiency in your new locomotives. » » » Firebox material must function under extremely high pressures. Toncan Iron firebox sheets resist corrosion and fire-cracking. » » » Higher boiler pressures have increased staybolt stresses. Alloy staybolts are available with greater strength and toughness. » » » Pins and bushings must combine surface hardness with toughness of core. Agathon

**Nickel Iron possesses these qualities to a high degree. » » » Forgings that are light, tough and uniformly strong, whatever the temperature variations, can be had in Agathon Alloy Steels. » » » These and many other special alloy irons and steels have been developed by metallurgists of Republic Steel Corporation to help the locomotive designer produce a more efficient locomotive. » » » Make full use of them. » » » Send for booklet on Alloy Steels—Address Dept. RA. » » » » » » » » » »**

# Republic Steel

C O R P O R A T I O N

ALLOY STEEL DIVISION, MASSILLON, OHIO

GENERAL OFFICES: CLEVELAND, OHIO



## RAILWAY AGE

---

# "Convenience and Necessity" of Tax Expenditures for Transport

Forms of industry which have limited capital investment in proportion to their annual production, or the capital investment in which can be easily diverted to providing other products, need very little government regulation in the public interest. But inland transportation is not such an industry. Aside from its being "affected with a public interest," the capital investment necessary for a railway, a highway or an improved waterway is very high in comparison with the annual earnings of the facility thus provided. Furthermore, once the investment is made, it cannot be retrieved and used for some other purpose. Hence it is necessary to exercise more than ordinary caution in investing money in transportation plant, if irretrievable waste of invested capital is not to ensue. When capital is wasted the productive capacity of society—and hence the national income—suffers. It is, therefore, perfectly proper that government should by regulation concern itself with the wisdom of projects of this kind.

### A Safeguard Against Wasteful Railway Construction

This the government has done as far as railroads are concerned. No company may build a new railway line without first convincing the Interstate Commerce Commission that "public convenience and necessity" would be served by such construction. The inadequacy of existing transport facilities must be shown, and an estimate of probable revenues must be given to indicate that the project would have at least some chance of financial success. The effect of the new construction on existing transport is likewise considered and, if the project promises considerable loss of revenue to existing agencies without offsetting advantages to the public, then it is likely to be looked upon with disfavor.

Only by some such safeguard can the investor be reasonably protected from having his money invested for him in enterprises with little prospect of financial success, and only in this manner can the investor in existing facilities be protected against cut-throat and anti-social competition destructive of his property. Without this protection the public would have no safeguard as to the solvency and dependability of the

transportation agencies upon which it depends. The need for a safeguard of this kind applies with equal force to all forms of inland transport; yet it is enforced upon the railroads alone.

### St. Lawrence Seaway Would Reduce National Income

The President of the United States last week sent a letter to a convention of St. Lawrence Seaway enthusiasts at Detroit in which he announced his intention once more of trying to force through the Senate ratification of the Seaway treaty with Canada. This project is designed to take traffic away from the railroads, not because the Seaway can handle it more cheaply, but because the Seaway is a device for shifting a large part of transport cost from the shippers to the taxpayers. Every competent person who has studied this project agrees that transport costs upon it, including the contributions of taxpayers, will exceed those of existing railroads. The seaway, if constructed, will, therefore, destroy in part the existing investment in transport facilities—not to the end that goods may be transported more cheaply, but that they may be diverted from a more efficient agency to a less efficient one. It would be hard to conceive of greater folly—a colossal expenditure of public money, the function of which will be to destroy wealth and reduce the national income.

Several years ago L. F. Loree and associated interests sought permission of the Interstate Commerce Commission to build a new railway across Pennsylvania. Carefully located with minimum grades, this line would admittedly have reduced transport costs as compared with those of existing routes. But the Commission refused to permit the line to be built on the grounds that the economies would not be sufficient to offset the losses which would be sustained in values built up in connection with existing routes. This decision, taken together with the administration's attitude on the St. Lawrence Seaway, indicates that the policy of the United States government with respect to transportation facilities is essentially as follows: We will protect the destruction of values along existing transport routes against the competition of a more efficient newcomer, but we will do our best to put them out

of business by subsidizing a less efficient new competitor.

The government exercises a paternal oversight lest railroad funds be invested uneconomically, but no such safeguard is set up to protect public investment in transport facilities. At one time expenditures on waterways had at least the flimsy protection of the necessity for a favorable report by army engineers and a Congressional appropriation. But the Florida canal and several other waterway projects were started with relief funds under the authority of the President alone. Private investors in railway construction are protected against competing in a cut-throat manner with each other, but they are not protected against cut-throat competition from tax money. And there is absolutely no impartial authority which must approve the investment of tax funds in transport facilities. No safeguard whatever is provided against extravagance and waste.

#### Mr. Budd's Timely Recommendation

In an address a few weeks ago before the Northwest Shippers Advisory Board, Ralph Budd, president of the Burlington, stated succinctly the nature of the change which is needed in public policy with regard to transport facilities provided with government funds. He said:

I believe that there should be applied to every government project before the expenditure is authorized the same test that is applied in the case of proposed railway expenditures. Before the building of extension of a railway line, it must be shown by testimony presented at public hearings, and by statistical data, that the proposed improvement will not adversely affect other transportation serving the territory, that the traffic with which the public can advantageously favor the new facilities will be sufficient to yield a fair return upon the proposed investment so that they will not become a burden upon other parts of the system or upon other traffic. If such a safeguard is wise for the protection of the public, which, theoretically at least, has to support the railways through the charges they may make for their services, then is it not as reasonable and even more necessary, before public expenditures are made directly out of the taxpayers' money, that at least the same scrutiny be given to proposed government projects, and the expenditure authorized only when it is found economically sound and when the Interstate Commerce Commission or other appropriate authority would issue a certificate of public convenience and necessity? I believe that the provision as regards railroad extensions is a wise one, and believe that it would be equally wise to subject all public projects to the same test. This would include proposed new highways and the character of surface that would be used upon highways.

The utter lack of principle of most politicians and many business men in connection with boondoggling expenditures of tax money for transportation is so bizarre that it is comical. Expenditures which constitute a dole to the politician's constituency or the business man's private pocket are viewed complacently, but expenditures no more wasteful for the benefit of some other section or interest strike them as threats to our form of government, and even civilization itself. All the criticism of New Deal "socialism" by Old Deal beneficiaries of, and enthusiasts for, profligate waterway and highway expenditures falls into this category of clownish insincerity. Senator Vandenburg has

valiantly and ably led the fight against the Florida canal, but he has at the same time been in the forefront of contenders for the equally indefensible St. Lawrence Seaway.

The crisis of America is not primarily economic, or even intellectual. It is ethical.

## Revenues Rise More Rapidly Than Car Loadings

Freight car loadings are one of the best indices we have of railroad business because they are so quickly available. They are not an ideal index of railway prosperity because railway revenues do not fluctuate in direct proportion with them. With car loadings since the middle of last August persistently better than those of the corresponding week of the preceding year, what has been the effect on railway revenues? A study of the figures shows that the increase in car loadings has consistently understated the increase in freight revenue. This is shown clearly in the following table comparing car loadings, revenue ton-miles, railway revenues and net operating income in the last three months of 1935 with the same months in 1934:

Per Cent Increase 1935 Over 1934					
	Freight Car Loadings	Revenue Ton-Miles	Freight Revenue	Total Operating Revenue	Net Railway Operating Income
October .....	13.7	17.3	19.2	16.5	52.9
November ...	11.8	15.6	19.0	17.2	66.6
December ...	10.1	12.9	17.4	15.0	17.3

It will be noted that, while freight car loadings increased from 10 to 14 per cent in the last three months of 1935, actual freight traffic as measured in ton-miles increased from 13 per cent to 17 per cent and freight revenues from 17 per cent to 19 per cent. There are several factors which account for the greater proportionate increase in traffic and revenues than in car loadings. One is, unquestionably, the temporary increase in freight rates which was in effect in the latter months of 1935 but not the earlier months. Another factor is the increased load per car. When traffic is on the increase, not all the increase is shown in more cars loaded; some of the increase goes in greater loading per car. In October, 1935, for instance, the average car had one-half ton more paying freight in it than in the same month of 1934.

Total operating revenues in the last quarter of 1935, it will be noted from the table, increased more rapidly than car loadings, but not as rapidly as freight revenue and freight ton-miles. But the greatest increase of all occurs in net railway operating income. This is the figure which really gages the prosperity, or lack of it, of railway operations. It is the figure an increase in which eases the railroads' credit problem, and enables them to purchase the materials and equipment which a rising traffic demands. In the last few weeks the increase in freight car loadings over a year ago has varied

from less than 5 per cent to over 10 per cent. This increase is important and gratifying. But railways prosper, not from car *loadings* but from *transporting* net tons of freight. Experience shows that, when car-loadings increase, the ton-miles the railways transport and their earnings for the service performed rises at a much higher rate. The railways are not "out of the woods," as Mr. Eastman warns, but they are on the way out—if they are permitted to retain their present basis of freight rates and if they are not waylaid by political unionism and relieved of the fruits of their modest recovery.

## Engineering Research

The subject of research is more prominently before engineering officers of the railways today than ever before. This was evidenced by the attention given to it by the American Railway Engineering Association during the last year under the leadership of its president, Robert H. Ford. It was emphasized in the address which Mr. Ford presented at the opening of the convention of that organization last week. It was brought still further into the spotlight by the address presented before the luncheon of that organization by Ralph Budd, president of the Chicago, Burlington & Quincy, which is abstracted on a following page. These authoritative statements give expression to the thinking of engineers at large on this subject and demonstrate the extent to which they are now giving consideration to this subject.

Statements have been made at intervals of late by men of prominence, criticizing the railways for their lack of activity in research. These statements have indicated an unfamiliarity with the work that the railways are actually doing that is not creditable to those making the criticisms. Yet the result has been to create an impression that is unfair to the railways.

One need only point to the record of safety, unparalleled by any other transportation agency, which the railways have attained year after year to demonstrate the degree of perfection which they have developed in the selection and design of the materials they use. More specifically one may point, by way of illustration, to the leadership that is universally accorded them for developing the science of wood preservation as a means of extending the life of their ties and timbers, and thereby saving millions of dollars annually, while conserving one of the nation's most important national resources. The railways may point also to the studies which they have initiated and have been carrying on for several years in stresses in track and in the causes of transverse fissures in rails, to demonstrate their receptivity to research of the most thorough character. Many other studies may be cited.

But it would be folly to stand on these achievements. A new day is arriving in transportation. Increasing competition intensifies the demands for maxi-

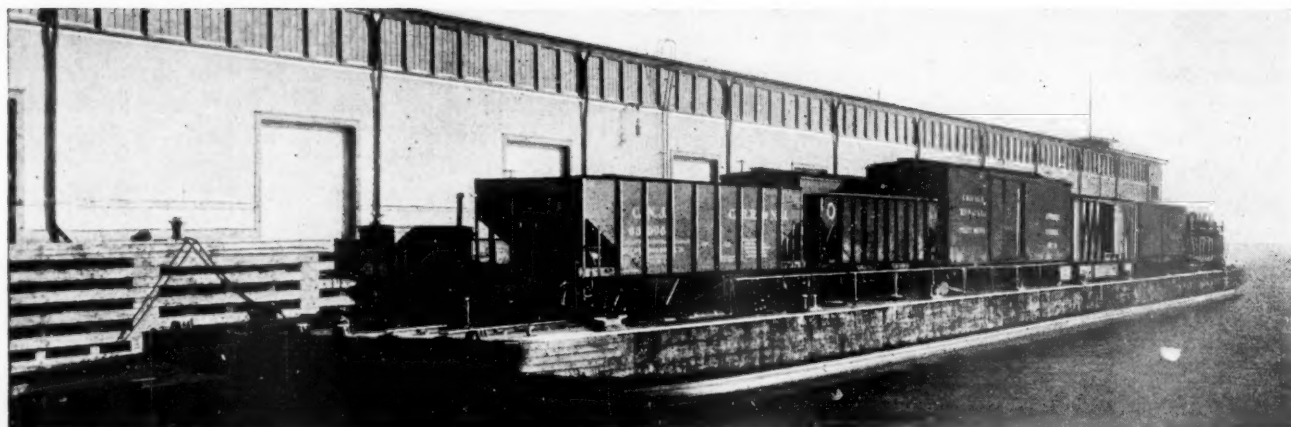
mum efficiency in all departments. Faster trains create new problems for track and rail, as well as equipment. These changing conditions point to the necessity for further and widely different investigations and studies. They call for a new era of research—possibly a new approach.

In the past, engineering research has depended primarily on the initiative of individual railways which have attacked problems of immediate and direct concern to them. Such studies have been highly valuable and their continuation should be encouraged. However, there has been little correlation of the activities of these different roads. Furthermore, many roads are without the resources to undertake such studies on their own account, while, to an increasing degree, the problems demanding attention are so far-flung as to exceed the ability of even our largest systems to undertake them individually. The studies of stresses in track and of transverse fissures which have been financed through special arrangements illustrate this condition. The nature of the problems before us is now such that concentrated attack is necessary.

Much prominence has been given recent estimates of economies possible through the co-ordination of terminals. However, even if all of these savings could be attained, and the accuracy of these estimates has been challenged, they would still fall far short of the economies possible through research directed to the solution of problems of immediate operating necessity, as well as those of more basic application for the future. The possibilities are of such magnitude as to challenge the best thought of the railway industry.

This problem will not be solved by the parceling out of a few dollars or a few thousand dollars here and there. The needs and the possibilities demand an appropriation sufficient to finance a program commensurate with the investment of the railways for roadway and structures and with the magnitude of expenditures made currently for their upkeep. The problem immediately before the railways today is one of policy and of organization.

If the railways are open to criticism for their attitude on research, it is because they have heretofore allowed the burden to be carried too largely by individual roads and have not united as an industry to attack fundamental problems. The railways have a common agency, the Association of American Railroads, through which engineering research can be financed and given general direction. They also have an agency, the American Railway Engineering Association, through which specialized direction and supervision can be given to a broad and continuing program of research in the same way that these two organizations are today giving effect to the specific studies of rail. Given this practical direction, the railways can effect economies in the construction and maintenance of their roadway facilities that will not only repay the cost of such investigations many times over, but that will also far exceed those that can be attained through the co-ordination of terminal facilities.



Car Float Alongside One of the Piers

# Railroad Marine Operations in New York Harbor

Interchange floating of freight cars, pier station floating, lightering service, and ferry operation

**A**N unusual program was presented at the meeting of the New York Railroad Club on the evening of Friday, March 20. A committee of heads of the marine departments of the railroads terminating in the New York metropolitan district gathered complete information about the railroad marine operations. The chairman, of the committee, J. H. Lofland, general manager of the New England Steamship Company, then incorporated this in a comprehensive address. The program also included three moving picture films showing the various marine operations in detail. These films were made especially for the occasion through the courtesy of the Pennsylvania, the Central Railroad of New Jersey, and the Reading railroads, E. F. Harrison of the Reading Railroad, taking the pictures. Extracts from Mr. Lofland's address follows:

In speaking of the railroads' marine operations in New York harbor some explanation should first be made of the reason or necessity for such an operation representing an investment of approximately \$50,000,000 in 150 tugs, 323 carfloats, 1,094 lighters and barges, 44 ferryboats and miscellaneous other special marine equipment employing 3,400 men with a weekly payroll averaging \$200,000.

A glance at a map of the New York area shows a continuous waterway extending in a northerly direction through the Narrows, Upper New York Bay and the Hudson River. This waterway presents a natural barrier to the continuous movement of rail freight in an easterly and westerly direction and, with the East River, the Harlem River and tributaries, forms the 700 miles of waterfront surrounding and contiguous with New York Harbor.

The densest population of the New York area is on Manhattan Island. The next greatest concentration is in the Borough of Brooklyn and Queens, likewise on an island. Goods trans-shipped from terminals on these islands must therefore cross water in moving to

and from the interior except as this restriction is being somewhat relieved by the building of vehicular bridges and tunnels, following the advent of motor trucks for local and long distance hauling.

The most desirable piers and shipping facilities for ocean vessels are on these islands. Manhattan Island was historically the nucleus of the city and of the port. It is the largest and most important trade center in the United States and, together with Brooklyn, has an immense warehousing, producing and consuming capacity of its own.

New York as a port, and the importance of Manhattan and Brooklyn in the shipment and trans-shipment of merchandise, antedates the railroads by many years. Ships and barges have been a familiar sight along the waterfront and in the harbor from the very beginning of the history of New York. During the early growth of New York as a trade center, the shipment and trans-shipment of merchandise was entirely dependent upon movement by water, with piers and warehouses growing up along the lower east side of Manhattan Island and the adjacent Brooklyn shore. Before any rail transportation was available New York had established trade routes by water to all the important ports of the world, including the growing cities and towns of our Atlantic Coast from Boston to New Orleans.

With the growth of the country as a whole and with the completion of the magnificent system of rail transportation as we now know it, this very busy area of which New York and Brooklyn have so long been the center, is now served by 12 railroads, several of which are important trunk lines affording direct communication between New England, the South and the West, as far as the Pacific Coast.

Up to the present these railroads have developed no means of overcoming the water barrier surrounding the islands of Manhattan and Long Island and impeding the natural movement of freight in an easterly and west-

erly direction, except by a very extensive and probably unexampled use of carfloats, lighters and barges.

There has been developed a system of railroad terminals on both sides of this water barrier, with so-called float bridges, pier stations and lighterage piers, to handle the freight business which at other large cities, and at most other ports whose development has taken place more nearly in step with the growth of the railroads, is generally received and distributed from transit sheds, freight houses and team tracks.

### Interchange Floating

Considering first that part of the marine operations necessary for the through movement of freight cars between New England and the West and South, and between Long Island and the various trunk line points. During the month of October, 1935, 76,099 freight cars were floated across this waterway from the rail terminals on one side to connecting rail terminals on the other side to be put into train line for completion of the rail movement without breaking cargo and under through billing. Most of this transfer of freight cars by floating from one rail terminal to another, or from float bridge to float bridge, is regularly performed according to a schedule permitting the operation of scheduled freight trains to continue without interruption.

Transferring the 76,099 cars above referred to during October, 1935, involved 940,000 tons of miscellaneous freight such as ordinarily moves in rail service, including structural steel, coal, iron, copper, merchandise of all kinds, forest products, perishables and livestock.

The carfloats used in interchange service are built of steel with three tracks on deck and vary from 257 ft. to 360 ft. in length, with a maximum capacity of 25 loaded cars. In this service the carfloats are usually towed in pairs with the tugboat between the floats. Each carfloat may weigh as much as 1,000 tons in itself and the cars and contents of each carfloat may weigh as much as 2,500 tons, so that the total weight handled by the tugboat may, and frequently does, amount to more than 5,000 tons. The handling of such a load through the congested waters of New York Harbor requires skill and experience on the part of the tug captain.

At the rail terminals each float bridge is equipped with an adjustable extension, or bridge apron, by means of which the rails over the float bridge can be lined up with the rail ends on the carfloat and locked in place by means of heavy toggles, for the loading and unloading of cars to the floats.

The interchange of cars by tugs and carfloats continues day and night through 365 days of the year, except when occasionally interrupted by impossible weather conditions, such as fog, blizzard or heavy ice. The only serious interruptions have been from fog and the records indicate that some part of the interchange movement is interrupted or delayed by heavy fog on 14 or 15 days of each year. There are many times, however, when this transfer movement continues on schedule through fog and other weather conditions that would be considered entirely impossible by anyone not experienced in water operation and not familiar with the particular difficulties involved. The tug captains and crews make every effort to keep the freight moving as long as it is possible for them to be sure of their direction and as long as they feel that they are not deliberately inviting damage to the equipment.

### Pier Station Floating

Another part of the marine operations found necessary by the railroads in New York Harbor, and more

important to most of them than the interchange service, is in connection with what is known as their pier station service. The rail terminals of the Pennsylvania, Lackawanna, Erie, Lehigh Valley, Jersey Central, Baltimore & Ohio, West Shore and Ontario & Western railroads are all on the Jersey shore. The New York Central is the only railroad in a position to serve any part of lower Manhattan by direct rail connection. All of these railroads have found it necessary or expedient to extend their natural rail terminals by establishing pier stations for receiving and delivering perishable freight and merchandise on Manhattan Island and at certain points on the Brooklyn shore, transferring the freight between these pier stations and their rail terminals by means of tugs and carfloats.

The carfloats used in this service have two tracks on deck with a covered freight platform extending lengthwise of the float and between the two tracks, at the level of the car floor. Cars are loaded to the floats at the rail terminals and the floats are then towed to the designated pier stations. When the floats have been set up at the pier stations the operation of unloading and loading cars proceeds in just the same manner as at any rail station, freight house or team track.

Ordinarily incoming freight for New York is moved to the various pier stations on Manhattan Island and along the Brooklyn shore in the early morning. The floats remain at the pier stations all day. Incoming freight is unloaded and outgoing freight loaded to the cars during the day. The cars are then sealed and billed and the floats are towed away at the end of the day, according to a schedule that permits them to be dispatched in regular night trains for western and southern connections.

There are 38 pier stations maintained and operated by the railroads on Manhattan Island and along the Brooklyn shore. During October, 1935, 412,903 tons of miscellaneous freight was handled through these stations, with a float movement of 83,649 cars. At most of these stations inbound and outbound freight is handled in just the same manner as at the usual railroad freight stations, as already described, but there is a large volume of farm products and perishable freight, the movement of which is largely inbound, with no corresponding outbound movement.

### Lighterage Service

Another very important part of the railroads' marine operations is in connection with lighterage service. A report recently published by the War Department and the United States Shipping Board Bureau, gives figures indicating that there are 138 established steamship lines in the port of New York, of which 103 are in foreign trade, 12 intercoastal and 23 coastwise. There are also 30 local and inland lines operating for the most part through Long Island Sound and the Barge Canal. During a recent typical year the total water-borne commerce of the Port of New York was in excess of 120 million short tons, having a net value of more than 10 billion dollars. This immense commerce represents the complicated movement of freight into and out of the Port of New York on its way to and from every city, town and village of the United States. The local New York area is a large consuming and manufacturing center and does an immense export and import business on its own account.

Ships arriving at the piers in New York carry a great variety of freight which finds its ultimate destination in the city itself, or in innumerable points in the interior. Outgoing ships receive freight from the many industries

of the interior and from the city and adjacent territory. If steamship freight is unloaded at a Manhattan terminal, that part destined to the interior must, in the absence of direct-rail connection, be lightered to the New Jersey shore. If the freight is unloaded at a New Jersey steamship terminal, that part destined to the City of New York or to Brooklyn or New England points, must similarly be lightered or floated. This necessity involves the use of lighters, barges and tugboats, in which the railroad owned fleet plays a large part. Besides the 52 railroad terminals and stations there are 150 steamship piers and more than 100 public and private docks. For this lighterage service the railroads maintain 1,094 lighters and barges and more than 50 tugboats. In addition, there are several types of special service equipment—172 derrick barges with a lifting capacity of from 5 to 65 tons for handling heavy commodities, such as machinery, structural steel, etc., 34 self-propelled lighters for express service on small shipments and 75 grain barges for transporting bulk grain to or from steamers or barges.

#### Co-ordinated Dispatching

A single steamer may have freight for all the railroads and each railroad may deliver freight to the same steamer, with the result that the tugs and barges of several railroads may be alongside a given steamer at one time. This occasionally gives an appearance of lost motion and duplication of service, and the urge for efficiency, together with the very popular notion of the advantages to be gained by co-ordination, resulted in the establishment of a committee for the purpose of co-ordinating the operation of the railroad equipment in an attempt to obtain greater efficiency, particularly with regard to the tugs and barges engaged in lighterage service.

On November 19, 1933, a central dispatching office was established at 21 West Street with the tug dispatchers working in close contact with each other and at one central dispatching board. Instructions were given to all lighterage supervisors that as their individual lighters and barges were loaded or unloaded and ready to be towed, orders for towing, with destination and required time, should be immediately reported to the central dispatching office, the towing order then to be executed by the first available tug. Under this arrangement the tugs of the various railroads are used in performing service for each other and, during October, 1935, the railroads exchanged 1,772 towing jobs as a result of this co-ordinated effort.

In speaking of the lighterage operation both lighters and barges have been referred to. Both are rectangular craft of rough design, usually about 90 ft. long by about 30 ft. wide, with a capacity varying from 250 to 400 tons. As the term is ordinarily applied, a lighter has an uncovered deck, is fitted with a mast and boom and is used for carrying rough commodities not affected by the weather, while a barge is housed over and fitted with weather-tight doors and is used for perishable and other freight susceptible to damage from exposure to the weather. In the combined railroad-owned fleet there are 140 refrigerator barges designed for the protection of fresh beef and highly perishable freight in hot weather and used equally as much, and by the addition of stoves, for the protection of perishable freight in very cold weather.

The handling of import and export grain adds materially to railroad revenue and requires a special marine operation in New York Harbor. There are four large grain elevators with facilities for handling bulk grain

from cars to storage bins, and for delivery to barges for distribution in the harbor, or for loading direct to steamers. In 1935 the total grain handled by water from the railroad terminals in New York Harbor amounted to 6,286 cars, or 10,535,751 bushels.

Those railroads tapping the coal regions west and south of New York handle a large volume of coal for local consumption in the New York area. Modern coal handling facilities have been established at the Jersey terminals of these railroads, with a combined capacity of more than 9,000 tons per hour.

The coal is dumped from cars to barges and towed to the various power plants, industries, wharves and steamship piers along the waterfront of the Bronx, Manhattan Island, Long Island and New Jersey. In October, 1935, 13,979,910 tons of coal were towed from these rail terminals for distribution in the harbor.

The same necessity that compels the railroads to extend their freight terminals to pier stations convenient to the markets and trade centers of Manhattan and Long Island, has prompted the use of ferryboats for the transfer of passengers to and from the rail terminals. These ferryboats also transport a large number of foot passengers and vehicles. In October, 1935, the 44 ferryboats owned and operated by the railroads carried 6,091,132 passengers and 772,226 vehicles across the Hudson river between the Jersey Shore and Manhattan Island.

#### Maintenance

The maintenance and repair of the 150 tugs, 323 carfloats, 1,094 lighters and barges, 44 ferryboats and miscellaneous other marine equipment offers a considerable problem. The many factors involved in the operation of marine equipment make it imperative that its inspection and maintenance be careful and thorough and follow fairly rigid standards.

Loaded coal cars weighing 100 tons are not unusual and some of the newer all-steel box cars will weigh as much as 60 tons when loaded. When a carfloat is firmly fastened by one end to the adjustable float bridge apron, with the body of the float free on the water, the pulling and loading of such heavy cars subjects the float to severe shock and heavy strain. When a tugboat is underway, with a heavy carfloat on each side, the very ordinary disturbances of the water caused by passing vessels or by a light breeze result in continued jarring contact between the tug and the floats. In any kind of rough weather this is increased and there have been occasions when loaded cars were derailed on a float as a result of the pounding of the floats against each other and against the tug.

Aside from the rough usage to which much of the marine equipment is constantly subjected, there is the further effect of corrosion and deterioration due to salt water and the active marine growth that exists in salt water. As the marine equipment moves about the harbor it advertises the name of the owning railroad before millions of people from all over the world and the effect of the appearance of the equipment cannot be overlooked.

Six of the railroads in New York Harbor own and operate marine repair yards representing an investment of more than \$5,000,000 in plant and equipment and employing an average of 1,000 men. Most of the repair yards are adjacent to the rail terminals and are capable of performing all classes of running repairs that may be necessary above water, including in most cases, facilities for fairly extensive rebuilding of hulls, engines and boilers.

# Can Boiler Explosions Due to Low Water Be Prevented?

A discussion of the protection afforded by the multiple application of boiler drop plugs in crownsheets

By Frank Russell

Mechanical Engineer, Southern Pacific, San Francisco, Cal.

THE Chief Inspector, Bureau of Locomotive Inspection, Interstate Commerce Commission, in his report for the fiscal year ended June 30, 1935, again states that boiler explosions caused by crownsheet failures continue to be the most prolific source of fatal accidents. There was an increase of four accidents, an increase of 17 in the number of persons killed and an increase of 39 in the number of persons injured from this cause as compared with the previous year.

In Table I is shown the number of boiler explosions and crownsheet failures as reported by the Chief Inspector of the Bureau of Locomotive Inspection for the years 1930 to 1935, inclusive. Comparing the year 1935 with

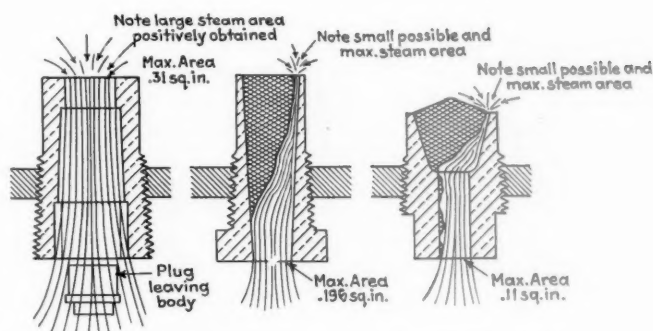


Fig. 4—Effectiveness of Different Types of Fusible Plugs

Table I—Boiler Explosions and Crownsheet Failures as Reported by Chief Inspector, Bureau of Locomotive Inspections, Years 1930 to 1935

Year	Number of locos.*	No. of boiler explosions	No. of persons		Per cent of total fatalities	Total fatalities all causes, steam locos.
			Killed	Injured		
1930	61,947	11	11	13	84.6	13
1931	60,841	14	15	41	93.7	16
1932	59,110	6	8	9	88.9	9
1933	56,971	5	2	6	25.0	8
1934	54,283	7	4	21	57.2	7
1935	51,283	11	21	60	72.4	29

\* Number of locomotives for which reports were filed.

1934, it will be noted there was an increase of four boiler explosions, or 57.2 per cent, an increase in number of persons killed of 425 per cent and an increase of 186 per cent in number of persons injured.

Many types of fusible plugs, low-water alarms and devices to warn engine crews in case of low water have been developed and tried on locomotives to prevent boiler explosions. However, notwithstanding, boiler explosions still occur.

The Southern Pacific Lines for the past four years has had its locomotives protected against overheated crownsheets and explosions due to low water by the use of the multiple application of boiler drop plugs. In Table II is shown the record and performance of the multiple ap-

plication of boiler drop plugs for the years 1932 to 1935 inclusive, the number of locomotives equipped, the number of plugs in use and the number of locomotives on which plugs dropped on account of low water.

During these four years there has not been a single case of low water where boiler drop plugs have not

Table II—Record of the Application and Performance of Boiler Drop Plugs on the Pacific Lines of the Southern Pacific

Year	No. of locomotives equipped Each combination						Total plugs in use	No. of locos. on which plugs dropped because of low water			No. of plugs dropped, cause undetermined		Per cent of total plugs in use
	1	2	3	4	5	6		Total	Responsibility	Yard or Rhse.	Total	No.	
1932	85	109	493	455	246	51	1439	5138	4	6	10	2*	0.0389
1933	..	109	516	472	249	51	1397	5205	5	7	12	1*	0.0192
1934	..	97	501	489	249	51	1387	5204	5	6	11	0	.....
1935	..	106	474	470	249	51	1350	5137	11	6	17	0	.....

\* Evidence indicated low water but was not conclusive.

functioned and prevented injury to employees and damage to firebox sheets.

Prior to the use of boiler drop plugs, we had no idea of how many cases of low water and overheated crownsheets we experienced per year as only such cases as resulted in an explosion, dropped or badly overheated crownsheets, came to our attention. With the application of boiler drop plugs, we obtain a record of every case of low water since every time a boiler drop plug functions the master mechanic is required to make an investigation and file a report.

During the year 1935, the Pacific Lines of the Southern Pacific Company reported 1,597 locomotives to the Interstate Commerce Commission, and experienced 17 cases of low water. During the fiscal year ending June 30, 1935, the chief inspector, Bureau of Locomotive Inspection, reports that throughout the United States there

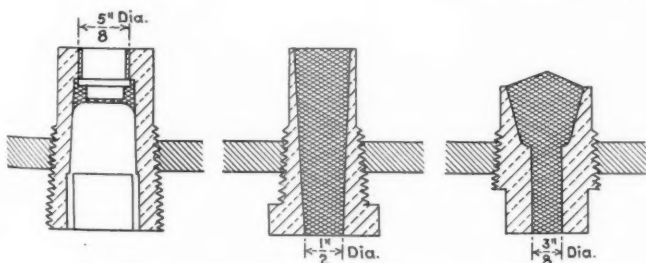


Fig. 1 (Left)—Southern Pacific Boiler Drop Plug

Fig. 2 (Center)—A Common Form of Fusible Plug

Fig. 3 (Right)—Another Common Form of Fusible Plug

was 51,283 locomotives reported to the commission and by applying the same ratio of cases of low water to the number of locomotives reported on the Southern Pacific Lines to the total number of locomotives reported to the I.C.C., we find there would have been about 546 cases of low water experienced on locomotives in the United States during the fiscal year, of which 11 resulted in boiler explosions, the cases of dropped crown or damaged sheets not being reportable to the I.C.C. unless injuries occurred therefrom.

It is interesting to note the similarity in the trend of increase in boiler explosions as reported by the I.C.C. and the increase of cases of low water experienced on the Southern Pacific Lines, the former being 57.2 per cent and the latter, 54.6 per cent. This increase was, no doubt, due to the increase in business and the number of crews called back into service.

The boiler drop plug used on the Southern Pacific Lines is shown in Fig. 1, and should not be confused with various forms of fusible plugs used in the past or being used at the present time, some of the common forms of which are illustrated in Figs. 2 and 3. In these types of plugs the fusible metal is usually applied in the form of a core and in some cases when the plug becomes heated sufficiently to melt a portion of the fusible metal, the

of heat to the crown-sheet, filling the firebox and flues with steam, displacing the air and smothering the fire on account of a lack of oxygen necessary to support combustion.

The number of drop plugs in an installation is based on the application of one plug at the highest point of the crown-sheet and one additional plug providing 0.30 sq. in. of steam opening for each 400 sq. in. of gas area of the tubes and flues. The plugs are so located that the main group or the majority of them are in the crown-sheet directly over the hot-test portion of the firebox.

In the manufacture of boiler drop plugs, positive assurance is made that plugs will operate as intended by a strict control of manufacture and tests. The requirement of the temperature test is that the drop plug must not break loose at temperatures less than 550 deg. F., but must loosen at 575 deg. F. This temperature range is sufficiently high to prevent premature functioning of the plugs in locomotive boilers carrying up to 250 lb. pressure.

The application of boiler drop plugs increases the safety of operation and assists in reducing the cost of boiler maintenance. Properly located and spaced in the crown-sheet, in the event the water in the boiler becomes low from any cause and before the crown-sheet becomes

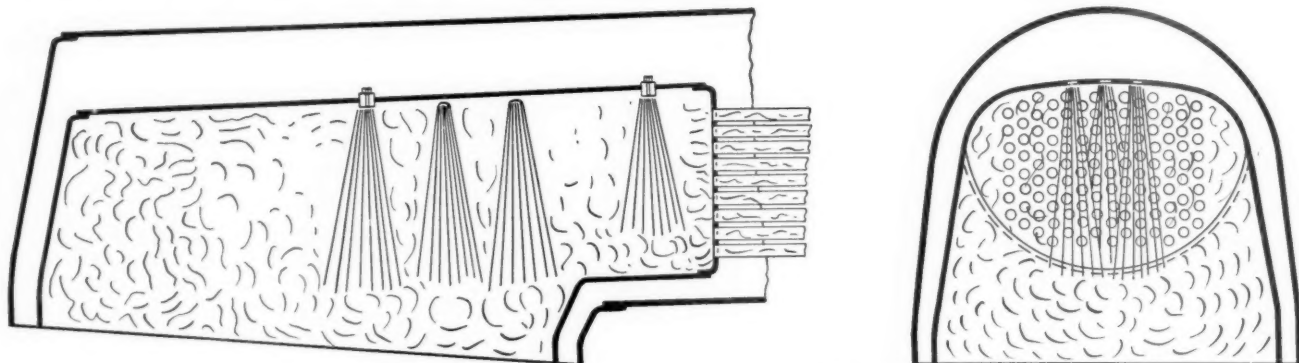


Fig. 5—Effect on the Fire of Southern Pacific Drop Plugs

steam will break through, which immediately cools the plug and prevents all the fusible metal from coming out, thus materially restricting the steam flow. By referring to the illustrations shown in Fig. 4, the effectiveness of the drop plug compared with the solid alloy metal fusible plug may be readily seen. With the boiler drop plug the brass plug is held in place by an annular ring of fusible metal and the head of the plug, which is on the fire side, is also covered with fusible metal to insure free movement of the plug should scale or carbon deposits form on the inside of the shell of the plug.

Our experience has demonstrated that locomotive boilers have increased in size beyond the capacity of one or two plugs, as we have had cases where these large boilers were fired and the engine worked against the blowing of two drop plugs. Experience has also proved that employees do not always recognize the alarm caused by escaping steam due to the fusing or dropping of plugs, hence it was necessary to make the application so that their action was automatically effective as in an automatic block signal. With this application an effect similar to that of a sprinkler system, in which a spray of water is released in case of fire, was obtained. In this manner, should the first alarm not be heeded and proper action taken, sufficient plugs would come into action to prevent an explosion and damage to the firebox.

In Fig. 5 is shown the effect on the fire of the escape of steam through the drop plugs which prevents the rise

overheated, these boiler drop plugs will fuse and admit steam to the firebox in sufficient volume so that the crown-sheet will be protected.

The reliability and protection to human life and property has been fully proved by four years use of the multiple application of boiler drop plugs on the Southern Pacific Lines on over 1,350 locomotives of various types with boiler pressure ranging up to and including 250 lb. pressure, and with locomotives in all classes of service. This proves beyond reasonable doubt that boiler explosions with incidental loss of life and damage to property can be prevented, as well as serious damage to fireboxes on account of overheated sheets.

The following are a few typical cases experienced where the use of the multiple application of boiler drop plugs prevented boiler explosions or damage to fireboxes:

Engine 4327 in Taylor roundhouse had all five drop plugs fuse because of low water. Investigation developed that blowoff cocks either worked open or were kicked open so that water was allowed to get three inches below the highest point of the crown-sheet while under the charge of the fire builder. The crown-sheet was overheated covering an area of about 55 sq. ft. However, no serious damage had been done.

Engine 4360 in roundhouse at El Paso had all five plugs drop due to low water. The hostler left the engine standing with a spot fire in the firebox, as he intended to move the engine to another stall later. A few minutes after leaving, the boiler washer connected the blow-down line to the engine and proceeded to blow it down for boiler washing. Inspection and test

of the engine showed no damage to the firebox or boiler, and prompt functioning of the plugs undoubtedly prevented a serious explosion.

Engine 2942 operating on the Patagonia branch dropped two boiler plugs on account of low water. Investigation disclosed that about 10 sq. ft. of crown sheet was exposed and that water had been allowed to get 1½ in. below the highest point of the crown sheet. No damage to the firebox or boiler.

Engine 2247, Extra West light, dropped one drop plug due to low water. Investigation disclosed that the fireman blew the engine down through the blowoff cock but could not get it closed again on account of the lever sticking up on the running board. When finally closed, pressure had dropped to 40 lb. and a considerable amount of water was lost, exposing the crown sheet. No damage was done to the firebox or boiler.

Engine 4350 operating on a 1.8 per cent descending grade on Train 6 dropped all five drop plugs due to low water. In the

investigation, the engineman stated he did not experience any trouble with the engine steaming or maintaining the water level in the boiler. He heard a blowing or sizzling noise, which he thought was the overflow from the injector. The fireman found it was not the overflow from the injector, then tried the atomizer and found it was not the cause. He looked at the water glass and there was no water in sight. He tried the bottom gage cock and thought he had a flutter of water, and then the injector was put on and left on; however, water did not show in the glass. The injector was left on for a considerable time, and the fire was burning in firebox until pressure became low in boiler and the injector would not operate and then the fire was extinguished. Inspection of all appliances failed to disclose any defects that would in any way contribute to low water. Evidence showed that the crown sheet had been exposed 22 rows of crown stays back from the flue sheet; however, no damage was done to the firebox or boiler.

## Is an "Outside" Trustee Needed?\*

Argued that a disinterested independent trustee would justify capable managements in the public mind and insure effective reorganization

By Cassius M. Clay

Counsel, R. R. Division, R. F. C.

THE causes why certain railroads have to go through periodic reorganizations every 15 or 20 years have been fully explored time and again by more competent authorities than myself, including Mr. Eastman and others. I want to deal with a neglected side of the question, namely, what a reorganization is for. Bankers and business men are apt to be actuated by wishful thinking or else by a desire to get the better of somebody else in the horse-trading that goes into the making of a plan of reorganization. Congress has sought to avoid offending tender sensibilities by labeling as "debtor" legislation the acts passed for the benefit of individuals, farmers, railroads and corporations generally. Lawyers, at any rate, can perform a definite service by bringing to the consideration of problems arising under this legislation a trained approach, and a realistic appreciation of the advantages and limitations of a proceeding thereunder.

### "Washing Out" Old Mistakes

As the Supreme Court clearly stated in its Rock Island decision, Section 77 (the Railroad Reorganization Act) is a bankruptcy statute. Only as a bankruptcy statute has it a clear constitutional basis. Now the most important thing about bankruptcy is the discharge from bankruptcy given by the Court. The final order entered by the Court allows the concern to begin a new life, washed, let us hope, of its previous sins, both business and financial. In the end, the success or failure of reorganizations effected under Section 77 will depend upon the extent to which the aim is achieved of washing out old mistakes in the reorganization.

Over a stretch of years, every large concern like a Class I railroad becomes obligated on numerous long-term contracts. Some of these were made for it by its bankers. Others were made by the management. Some were good contracts when made, but since have become bad contracts, by reason of a change in the economic

situation, the development of new traffic trends, new conditions affecting the business of transportation, and the like.

### There Are Bad Leases as Well as Bad Debts

I venture to suggest that over and above the duty owed by a lawyer to the group that he represents in a railroad reorganization, he has a duty to keep in mind the primary purpose of the reorganization proceeding, that is, the washing out of past mistakes, the relief of the property *not only from an unsound capital structure, but also from contractual arrangements not embodied in the capital structure which can no longer safely be carried.*

One provision in last year's revision of Section 77 which met with opposition in some railway quarters was that which requires the Court, in the case of the larger railroads, to appoint one or more independent trustees, if a trustee is appointed from the management. Let us look at this question in the setting of the times. Some of the railroads that are now in bankruptcy are of the group of railroads that periodically go through bankruptcy every 15 or 20 years; others, which are now in bankruptcy or conceivably might go into bankruptcy if earnings do not continue substantially to improve, are companies which have not had a reorganization since Civil War days.

The public mind does not discriminate. In Congress and elsewhere there is a widespread feeling that railroad managements have been inefficient and behind the times; that bankruptcy in most cases is due to faults in the management rather than to economic conditions which the management is powerless to control. In addition, the prejudice against bankers and banker control, whether merited or not, remains deep seated. Instancing this, the Senate in its last session, without a roll call, passed the Wheeler resolution for the investigation of railroad finance. One of its specific purposes is to determine to

\*Abstract of a recent address.

what extent banker control has harmed or benefited the railroads in the past.

### That Managements May Not Be Unjustly Accused

In these circumstances, I venture to suggest that railroad managements should welcome rather than look askance at the provision of the Act requiring the appointment of one or more neutral trustees. I do not mean to insinuate that independent trustees should be interposed to give anyone an immunity bath. Quite on the other hand, I have in mind the constructive service and benefit both to intelligent managements and the properties which will come out of the appointment of independent trustees—provided the persons chosen are of demonstrated ability and bring to their task the approach of a fresh judgment, unhampered by the subtle influence of previous alliances with those who have controlled the road.

### Duties of Trustees

I do not believe that the main duty of independent trustees, or the sole *raison d'être* for their appointment, is the bringing to light of possible causes of action for various acts of malfeasance, and the bringing of suits thereon. No less important are the manifold duties imposed upon trustees by Section 77 as amended at the last session of Congress. It is not too much to say that the success—the long run success—of a reorganization under the recent revision of the Act may depend no less upon the way in which the Commission and the Court function under the Act, than upon the type of the persons selected as trustees for the debtor railroad. Let us look for a moment at some of the duties imposed upon the trustees:

(1)—*Detecting Irregularities*—I have already mentioned the investigation of possible causes of action against any who have profited unlawfully at the expense of the trust estate. The Act says that the Court *shall* direct the trustees, after their appointment, to report "any facts pertaining to irregularities, fraud, misconduct or mismanagement as consequence of which the debtor may have a cause of action arising therefrom against any person or corporation." An honest and intelligent management will welcome such an investigation, in order that there may be removed any shadow of suspicion that the failure was preceded by any acts of malfeasance.

(2)—*Getting Rid of Burdensome Leases*—When the bankruptcy cannot be accounted for by general business conditions affecting all railroads in the territory, more often I believe it will be found that the causes of the bankruptcy have been due to mistakes of judgment on the part of management or of banker-control, rather than to infractions of law. I have already referred to the duty imposed upon trustees of making recommendations to the Court as to what existing contractual arrangements with third parties should be disaffirmed, to the extent that they are executory. The revision of Section 77 contains two highly important specific directions in this regard.

The first is with respect to leases, and changes the previously existing rule in equity proceedings. It is provided in the Act that if the debtor, as lessee, elects no longer to operate a leased line, the line after the expiration of a period to be set by the judge, shall be operated by the lessor, or, upon petition of the lessor, the judge shall decree after hearing "that it would be impractical and contrary to the public interest for the lessor to operate the line." In such event the lessee must continue operation until the abandonment of the line has been authorized by the Interstate Commerce

Commission. Secondly, the trustees are specifically authorized and directed to initiate proceedings for the abandonment or sale of line or other property "in the interest . . . of ultimate reorganization."

(3)—*Trustees' Certificates*—As in the case of equity receiverships, trustees are authorized to raise money by the issuance of their certificates of indebtedness for such purposes as receivers' certificates might properly be issued in equity receivership. The question of the issuance of receivers' certificates often involves difficult determinations of whether the reorganization will be embarrassed if defaults are permitted on senior mortgage obligations. The trustees, as appointees of the Court, are in a position to give disinterested advice upon this question, such as the Court cannot obtain from interested groups of bondholders.

(4)—*Segregating Earnings by Mortgage Divisions*.—Under the Act, the trustees may be ordered by the Court to keep records and accounts so as to permit of a segregation and allocation of earnings between mortgage divisions, owned lines and leased lines. In the first instance, they may determine the basis for segregating such earnings and may ask for a reference to the Commission for its recommendation of the method to be used in keeping the accounts. This power, again, is one of the highest importance, since the purpose of segregating earnings is to determine the relative treatment which should fairly be accorded to different mortgages in a reorganization. If exercised with judgment and ability by the trustees, they are in a position to aid in the solution of one of the most troublesome problems met with in a railroad reorganization.

(5)—*Advisers to Court*.—Under the new Act, trustees are required to submit to the Court such information as may be necessary to disclose the conduct of the debtor's affairs and the fairness of any proposed plan.

(6)—*Independent Audit*.—Subject to approval by the Court, the trustees may employ lawyers, accountants, engineers and other assistants.

(7)—*Reorganization Plans*.—Finally, the Act recognizes the preferred status of trustees by expressly providing that they may, if they choose, formulate and present to the Commission a plan of reorganization to be considered along with the proposals of other participants.

A mere recital of these broad powers demonstrates the importance of the trustees' functions. So exacting are the responsibilities that it may be questioned whether in the case of a major railroad system the results will not be better obtained by the appointment of more than one trustee. Men of sufficient experience and capacity to be able to meet successfully the demands that will be placed upon a single trustee in the major railroad reorganizations are rare.

This is recognized by the provision contained in the Act. Only in the case of the smaller railroads was discretion left with the Court to dispense with trustees entirely. The reason given for this exception was that, in the case of small properties, the expense of trustees might be too great a burden. Surely this reason cannot have applicability in the case of the large systems, where the addition of trustees' salaries, when spread over the system, can only mean a few cents additional per mile.

### Self-Perpetuating Management

I should like, in conclusion, to direct attention to the therapeutic usefulness of the requirement of independent trustees to remove from railroad reorganization the stigma attached to them in the public mind—often unjustly—because of occasional unsavory practices in the

(Continued on page 504)

Train Dispatcher's Desk at New Haven, Conn., on the New York, New Haven & Hartford



## Repeaters Improve Train Dispatching\*

An explanation of the advantages offered by new amplifying equipment and corrective devices as applied to dispatching telephone circuits

FOR many years railroad dispatching was done exclusively by telegraph; the simplicity and reliability of the circuits required for this type of communication made them highly satisfactory for railroad use. In recent years, however, the great speed of voice communication has resulted in widespread use of the telephone for dispatching. With this change the railroads have encountered many technical problems which are in large measure being solved by co-operation with the manufacturing and operating companies in the communication industry. As a result, suitable apparatus has been made available and improvements are constantly in progress of development.

Although the problems encountered in the design of dispatching circuits are unlike those of ordinary telephone circuits, they are solvable by the same fundamental principles and techniques. Where long circuits or unfavorable operating conditions require amplification of the volume of telephone conversation, vacuum-tube apparatus is utilized in the form of telephone repeaters. A telephone repeater consists essentially of a system of coils and transformers, vacuum-tube apparatus, a suitable power supply and what is known as a balancing network. The function of the latter is to stimulate at all times the electrical characteristics of the telephone line circuits.

One of the chief problems in the application of telephone repeaters to dispatching circuits lies in maintaining the proper "balance" between the balancing network at the repeater station and the telephone line itself, for without such balance the maximum advantage of ampli-

fication cannot be attained. Furthermore, in extreme cases of "unbalance," the system becomes unstable and a "singing" condition is set up, making the entire circuit inoperative. The amount of amplification permissible thus depends upon the degree of balance between the network and line. With perfect balance, if it were not for limitations in the capacity of the apparatus, there could theoretically be unlimited amplification. With imperfect balance, however, the amplification is limited by operating characteristics of the coil apparatus.

### Railroad Circuits Present Unusual Problems

In the commercial telephone systems, ordinary repeated circuits run between two points only, such as two repeater stations, and are of uniform electrical characteristics. It is comparatively simple, therefore, to design balancing networks that simulate them very closely, so that very satisfactory gains may be used in the repeaters. On railroad dispatching circuits, however, the situation is radically different. Since these dispatching circuits follow the railroad tracks, they branch wherever the railroad does, resulting in an electrical impedance irregularity at each branch point. In addition, the line may be of different construction in different places. It is open wire for the most part, but there is generally a section of twisted pair or cable at each station, causing a discontinuity at the point of junction.

A more serious obstacle to procuring a satisfactory balance between network and line is the telephone set at each station. Under the control of the station operator these may either be disconnected from the line,

\* Abstracted from an article entitled "Balance in Railroad Dispatching Circuits," by L. C. Roberts of the Bell Telephone Laboratories, Inc., in the Bell Laboratories Record.

connected to it for listening only, or connected for both listening and talking, and the resulting impedance is different in each case.

Some stations leave their sets in a listening position all the time, which is desirable from the dispatching standpoint since it allows the operator to hear what passes over the circuit all the time, and thus keeps him informed of train movements. In busy stations, however, where several wires must be answered, the telephone set may be connected to the dispatching circuit only for short intervals. To connect the set for talking, the operator depresses a switch with his foot, and when this is done the impedance bridged across the line may drop from several thousand ohms to about five hundred. Thus, on these dispatching circuits there are not only impedance irregularities, which make balancing difficult, but the impedance may be changed from time to time by considerable amounts.

#### Corrective Devices Required on Long Circuits

In the design of the latest repeater equipment for railroad dispatching circuits the variation in line impedance was recognized, and as a result the balancing networks were made adjustable. This provision makes it possible to secure enough gain in the repeaters to make them suitable for dispatching lines of ordinary length. Where very long circuits are involved, however, something further must be done to improve the balance, and impedance correctors have recently been provided which allow a considerable increase in the length of line over which satisfactory transmission is obtained.

These impedance correctors may take any of several forms depending upon the type of correction they have to make and the point in the circuit at which they will be placed. To reduce the variations in impedance of the telephone sets, they may be series resistances or transformers of one form or another; for branch circuits, only transformers are used. The correctors introduce some additional loss into the circuit, of course, but this is of no disadvantage on the far side of a repeater, since it can be more than made up by the repeater gain. The additional loss cannot be made up, however, when the impedance correctors are on the near side of the repeaters, and for this reason the repeaters may be located somewhat nearer the dispatcher's end of the circuit.

In connection with the development of the dispatching repeater, tests were made—through the courtesy of the New York, New Haven & Hartford—on a circuit extending between Pittsfield, Mass., and New Haven, Conn. Measurements of the electrical characteristics of this line without impedance correctors and under different operating conditions of the circuit revealed wide and irregular variations in the line impedance. Similarly, the same measurements were made under duplicate operating conditions but after impedance corrective apparatus was installed. The results of these tests, plotted graphically, demonstrate the value of these refinements. More specifically, however, considering the original circuit without impedance correctors and assuming only one telephone set connected for talking, the permissible gain of the repeater apparatus would be about 9 decibels.

Since the loss on such a line is about 1 db. for 15 miles, the use of repeaters alone, without correctors, would permit the line to be increased about 135 miles in length. Under the same conditions but with impedance correctors, the gain could be about 13 db., which is 4 db. more than without correctors. By use of impedance correctors with the repeaters, therefore, the line could be extended by nearly 200 miles.

The advantages of using repeaters and impedance correctors on dispatching circuits is thus obvious. Even

where a great length of line is not required, they would still prove economical by permitting smaller conductors to be used and a less expensive line installed without any sacrifice in the transmission characteristics.

## Is an "Outside" Trustee Needed?

(Continued from page 502)

past; and the somewhat analogous parallel found in the English practice which could profitably be grafted into American corporate law.

In their book, "The Modern Corporation and Private Property," Messrs. Berle and Means have elaborated a brilliant presentation of one of the most vital problems with which America has to deal. This is the problem created by self-perpetuating managements. Most of our large American industrial corporations have in the past been controlled by a small group of executives owing only a shadowy allegiance to the real owners of the property, the stockholders. Commonly, it is extremely difficult to marshal a sufficient vote of stockholders at an annual meeting to command a quorum. The general counsel for one of the large railroads with head office in Chicago told me not long ago that, at annual meetings, seldom more than a half dozen actual stockholders are present. This experience, as you know, is not unusual.

With a self-perpetuating management, the dangers are obvious. The English are more realistic about this matter than we have been and we have not yet, as have the English, invented a mechanism for checking the potential abuse of power. In the English corporation practice there is provision for an independent audit each year by auditors responsible not to the management but to the stockholders who appoint them. Surely no one can reasonably object to having a check-up made after a company has passed into the hands of the Court through the mechanism which is provided in this law for the appointment of independent trustees.

In closing, a word or two in regard to the problem of finding the right men to be independent trustees is not amiss. On the one hand, it is important that nothing be done to destroy the morale of the operating organization, since if this is impaired, both creditors and stockholders will suffer. For this reason, except in special cases, the Courts will probably find it advisable to appoint as a trustee one of the outstanding officers of the company. On the other hand, with human nature as it is, is it reasonable to suppose that in developing the causes of the bankruptcy, in deciding upon what executory contracts should be affirmed and what should be rejected and in determining the thousand and one problems involved in a complicated reorganization, the executive officers of the railroad, no matter how great their ability or how unimpeachable their integrity, can bring to the problem as free, unbiased and unprejudiced judgment as independent trustees?—who have not previously been responsible for the conduct of the affairs of the railroad under investigation, the making of the contracts under review and the development of an impartial plan of reorganization? For this reason, in my opinion, there should be appointed as an independent trustee in the case of large railroads a man of demonstrated ability, of independent judgment and unimpeachable motive, who will bring to the solution of the difficult problems with which he will be faced a conscientious regard for his responsibilities, unblemished by any spirit of capriciousness. These views, I need hardly add, are personal and not official in any sense.

# New Opportunities\*

Present conditions offer possibilities for great advances. Research will point the way

By Ralph Budd

President, Chicago, Burlington & Quincy

**M**OST of the talk about the railroad problem today deals with regulatory, taxation, financial and kindred phases of the subject, which may be called the public interest group. Not very much, or at least not a very large percentage, of the talking deals with problems of operation. Most of the discussion has been prompted by concern about the question "Why are the railways in such serious distress?", or more recently, "Why are the railways as an industry lagging behind the others in recovery?" This unfortunate state of affairs cannot be denied, but no single cause can be assigned. There are many collateral reasons for nearly 75,000 miles, or 30 per cent, of our railway mileage being in bankruptcy, or otherwise undergoing reorganization, and there are many varying opinions about the relative importance of these reasons.

But we are concerned here today with another type of railroad problem and I think happily so. It is the building and maintaining of a better property over which to run trains, and handle traffic at terminals and other stations. Whatever the relative state of railroad prosperity, be it favorable or unfavorable; whatever the form of management, whether private or governmental; whatever the level of rates or of wages; whatever the policy of regulation or finance, the very foundation of railway service and success is the permanent way. And everything that makes the physical plant more perfect or improves the system of maintaining it, promotes the welfare of the railways and improves their position compared with what it would be otherwise, and, may I add, promotes the welfare of the employees as well.

The cost of maintaining permanent way and structures of Class I roads has averaged about \$610,000,000 a year over a ten-year period, or about 17.4 per cent of total operating expenses, and 12.9 per cent of total revenues. That the average maintenance cost is far from the amount now being spent and far from what was spent in prosperous times, is evident from the fact that the figure was as high as \$868,000,000 in 1927, and as low as \$322,000,000 only six years later. It is surprising how closely the expenditure for maintenance of way and structures followed, downward, the amount of business done and the gross revenues, but it dipped lower than either of these in percentage of 1927 figures.

## Adversity Creates Opportunity

Several factors combined to make possible the very drastic reduction in maintenance during the depression.

Unquestionably, the properties had been built up to a very high standard during the time when earnings were sufficient; then when traffic declined, the wear and tear was much less; there was also a moderate decline in the cost of materials and, for a time, in wages; again, more modern methods and better tools were employed, and the fact that working gangs were smaller, and super-

vision better, resulted in more effective application of labor; and with all of these there was, of course, a substantial amount of deferred maintenance.

It may sound overly optimistic to say that in this adversity of reduced maintenance expenditures, there may be the seeds of opportunity for the railway maintenance engineers. But I believe that these latent opportunities do exist. How to take advantage of them may become the special objective of the American Railway Engineering Association.

In the first place, while it is confusing to the layman, all of us understand that maintenance of roadway and structures can be deferred for a considerable time without in any way impairing the usability of the railway. That is because of the relatively long life of many of the component parts, such as rail, ties and ballast. The many different parts are wearing out, one at a time and what happens when less than normal work is done on track and structures, is that some of the accumulated service life is used up. The question of safety is in no wise involved, but it does mean that after a period of such small expenditures for maintenance as we have experienced since 1929, there must come a period of much larger outlay.

Of course, certain of the items are non-recurring, and a part of the deficiency, therefore, will not have to be made up. It is safe to say, however, that several hundred millions of dollars will be put back into roadway and structures during the next few years, and therein lies our opportunity. Periods of relative quiescence in manufacturing always result in rapid advancement in design and technique, and that has been the case with railway maintenance standards and specifications, as well as with tools and equipment, since 1929.

## Exhibit an Impressive Demonstration of Progress

The railway appliance exhibit now at the Coliseum is an impressive demonstration of the progress that has been made during that period. The expenditures that will be made now and in the future will go much farther because of these improvements and inventions, the better designs of rail and other rolled sections, and finer quality of material used in track, bridges and buildings, than the same expenditures would have gone a few years ago. I consider the new rail sections to be of better design than we have had before, although I am aware that some slight modifications are being made. The same may be said of rail joints and tie plates. Heat treating of bolts and angle bars has proved highly successful, and now the "controlled cooled" and "normalized" processes promise something every railway official in any way responsible for track will appreciate, that is, rail more free from tendency to fissures. Of course, one cannot think of our new opportunities without thinking of the accomplishments of the metallurgists. They have revolutionized some technics, more particularly as applied to equipment manufacture thus far, but results

\* Abstracted from an address presented before the thirty-seventh annual convention of the American Railway Engineering Association at Chicago, on March 11.

in that field promise much for the future of maintenance of way and structures.

### Are Railways Dilatory in Research?

Only recently an officer of a manufacturing company made an address in which he said that railway men have been laggard in the use of scientific research, and recommended that they organize highly trained and competent staffs in technical bureaus. Too often proponents of extensive railway research have attempted to show, or have assumed, an exact parallelism between what might be done by the railroads and what has been done by others, such as the communication, automotive and steel industries, chemistry, etc. Enthusiasm about applying to unfamiliar fields the ideas that have brought phenomenal success in one's own field can be readily understood, but enthusiasm is not always synonymous with understanding. The railways present a research problem quite different from some of the highly centralized industries whose development and progress have been based almost wholly on research work. I am strongly in favor of railways having every benefit from scientific knowledge. They have not been without such benefits, however, and I insist that railway men have shown both ingenuity and inventive capacity. And they have progressed splendidly in the field of applied sciences. In the language of the day, "Let us look at the record." To mention only two outstanding achievements, there are the investigation of stresses in railroad track, and the investigation of the transverse fissure problem, the latter a joint undertaking by the railways and the manufacturers. For many years the custom has been for improvements in track and structures, tools and equipment, to be originated by men on the railroads, often in the maintenance of way department, or in the mechanical drafting room, and then for their inventions to be taken over by manufacturers. I believe it is fair to say that most of the patents under which railway supply people are manufacturing and selling to railroads originated in railroad sources; certainly a great many of them so originated. It is very misleading to say that the railway engineers and others have not been diligent and progressive in the perfecting of existing railway plant. I believe the railway supply companies will agree that there are many advantages in the plan of having the railways purchase their supplies and equipment, rather than do the manufacturing in railroad shops.

### Research Should Be Organized

We do, however, need a highly organized research department to take advantage of developments that are now proceeding at an accelerated pace. The motif of this decade is speed, and our work must be keyed to a new tempo. The speed of freight trains is 50 per cent faster than it was ten years ago and the same is true of many passenger trains. There is nothing to indicate that axle loads are going to increase much, if any, but impact may be greater at the higher speeds that seem to be coming so irresistibly. I say impact *may* increase rather than it *will* increase because we do not know how much may be done by locomotive builders to lighten the weight of rods, pins, and other balanced and reciprocating parts. With lighter equipment there would be less ton miles over the rails. That would make a difference in the wear and tear on track.

The possibilities of lighter weight equipment are intriguing. In 1934 approximately 400 billion ton miles were made in handling freight and passenger cars, exclusive of the loads they carried. If, as is quite possible, these cars should be reduced one-fourth in weight it would require 100 billion less ton miles to handle the

business. At one mill per ton mile, that amounts to 100 million dollars a year.

We were speaking about research. My idea is that this should be amply financed by the Association of American Railroads and in charge of a competent director. It should be organized on a permanent basis and I believe this association should control the carrying out of the projects. In addition to office and laboratory work there are necessary activities in the field also, but the field work and the laboratory work must be tied together very closely. The railways can provide the service tests. They will be the proving grounds and also sources for new ideas in the future as they have been in the past. It is just as truly research for a foreman or a roadmaster to observe and study the behavior of track in certain circumstances and report his findings, as it is for investigations to be made and written up by the finest scientist. But the two types, working together, will get farther than either one alone or both working separately. The point is that field work, office work and laboratory work should be carried on harmoniously, as parts of a plan, and not independently of each other.

There are certain definite objectives which present day circumstances indicate. Among them are the design and manufacture of still better rail; the better care of rail. Improvement in rail joints and tie plates is important, having in mind the prevention of battered rail ends, the practicability of welding joints and the use of long rails, and the hardening of rail ends. The study of impact, the use of alloy metals and welding should be pursued as in the past, but with renewed enthusiasm because of new materials, tools and methods recently introduced, and because of the more exacting demands upon the track which our bridges carry. Water treatment, concrete and timber have large fields of usefulness in railroad operation. All of these subjects and many others have had the benefit of splendid work by committees of this organization, but the exactions of the present and future demands upon roadway structures, coupled with the metallurgical and chemical knowledge now available give point to special investigation.

I appreciate the handicaps under which we have all been working, but the time has come when we must strive for more refinement in manufacture and inspection of track material before it is placed in track, and then, in the application and the care of it afterward.

The high speeds of today and the higher speeds of tomorrow and the heavy axle loads of cars and locomotives require the following of plans and specifications with a precision that never before was so important, and careful inspection is needed to prevent variations from these plans and specifications that might result in damage or failure. When laying rail, and after it is laid, the greatest precaution should be exercised to avoid conditions that may cause over-stressing in service.

It is not my thought that there is some magic by which things suddenly will be done, or that something will be discovered which has been overlooked, and that these things will bring a railway millennium. It is rather that we will be able to consolidate our gains and all obtain the benefits from what each individual road has been doing along similar lines.

### Much Yet To Be Learned

The American railways should know a lot more than they do about several things pertaining to track and bridges; things that no one railway can afford to learn alone or can learn so well alone. The directing of experiments, and the insuring of correct interpretations when demonstrations are made, are so important that a common staff should do them for the common bene-

fit. It is a real opportunity for joint effort and a challenge to the ability of the railways to co-ordinate in the interest of the whole industry.

It is strange how the same facts may be interpreted differently. The secret may lie in the point of view, which illustrates the advantage of a neutral organization to interpret results.

All bureaus have certain inherent handicaps, but in a research bureau those handicaps could be reduced to the minimum. Of course, the success would depend, as that of all organizations depends, upon the director or administrator. He must not be afraid to permit some experiments even though complete success may be in doubt; yet he should be able to recognize a "perpetual motion" proposition when he sees one, and waste no time upon purely visionary schemes. I heard of a case where a railroad had difficulty gaining permission from a bureau to move some light weight freight cars to its own line for experimental use after they had been manufactured. The reason given was that they had hollow axles and light trucks. But the axles and trucks were strong. We are going to revise our ideas about things being strong, only if they are large and heavy. Standard equipment offered for interchange may properly be rejected if the coupler shanks are not 6 in. by 8 in. or 5 in. by 5 in. in dimensions, as the case may be, provided the material is standard also, but if stronger metals are used the rules will have to recognize some other yardstick as a measure of strength, and, of course, strength, hence safety, is what is here involved.

No talk to this group should end without a word on safety and what I have been saying suggests it. The record of the American railways proves that they have not let anything; not financial disaster; not the competitive urge; not speed nor any other expedience, divert their minds from safety in operation. Every railway employee may take just pride in the fact that 18 billion passenger miles were run last year without a fatal accident in a collision or derailment. That is the equivalent of handling safely, every man, woman and child in the United States a distance of about 150 miles. It is the more amazing when one considers the slaughter which is more or less nonchalantly perpetrated daily on the highways. We are told by the National Safety Council that in the year 1935, there were 36,400 deaths, 107,000 permanent and 1,170,000 temporary disabilities resulting from highway accidents. The total economic loss to the nation from these deaths and injuries, together with the property damage loss, amounted to more than one and one-half billion dollars.

#### A Fine Record

Gentlemen of the American Railway Engineering Association, in your hands is the great task of providing the roadway, bridges, track, signals and other structures over which the immense streams of railway commerce will flow. You and your predecessors have had an ever changing problem as the locomotives and cars grew larger and heavier and the volume of traffic constantly increased. The changing requirements have been dealt with magnificently. Now you and your successors will have still different conditions to provide for. Faster trains and more of them, providing comfort and safety beyond those of any earlier period! You are not behind the procession, but well to the fore. Even after four full years of subnormal expenditures the properties in your care set a new all-time record for speed and safety. The same scientific principles, materials and methods which are being used in so rapidly advancing the types of locomotives and cars for which you are being

asked to provide ultra modern track, will yield for you, and in your hands, standards of roadway and structures equally advanced. These constant changes and improvements serve to keep this organization very much alive and lively. So long as the association lives up to its fine traditions, these very changes and constant improvements assure it of permanence and a perpetually youthful outlook, eager to embrace all new opportunities.

## Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading for the week ended March 7 totaled 634,828 cars, a decrease of 38,295 cars below the preceding week but an increase of 47,638 cars or 8.1 per cent as compared with the corresponding week of 1935. The decrease as compared with the previous week was due mainly to the drop of 41,957 cars in coal loadings. Loadings of all other commodities except coke were above those of the preceding week, while all, save merchandise l.c.l. and live stock, were above 1935. Also, all districts reported increased loadings as compared with last year. The summary, as compiled by the Car Service Division of the Association of American Railroads, follows:

Revenue Freight Car Loading For Week Ended Saturday, March 7			
Districts	1936	1935	1934
Eastern .....	138,618	134,761	150,396
Allegheny .....	121,199	118,090	127,323
Pocahontas .....	49,719	46,884	45,583
Southern .....	102,043	91,591	94,246
Northwestern .....	75,180	66,563	66,337
Central Western .....	94,530	82,729	82,380
Southwestern .....	52,939	46,572	47,855
Total Western Districts.....	222,649	195,864	196,572
Total All Roads.....	634,828	587,190	614,120
Commodities			
Grain and Grain Products.....	36,971	26,975	29,767
Live Stock .....	11,166	11,684	11,991
Coal .....	133,196	129,938	152,841
Coke .....	8,206	6,750	10,094
Forest Products .....	30,765	24,435	23,001
Ore .....	6,468	4,431	3,393
Merchandise L.C.L. ....	159,335	159,906	166,426
Miscellaneous .....	248,721	223,071	216,607
March 7.....	634,828	587,190	614,120
February 29.....	673,123	604,331	605,717
February 22.....	586,712	553,165	574,908
February 15.....	631,347	581,669	600,268
February 8.....	622,097	591,327	573,898
Cumulative Total, 10 Weeks.....	6,123,057	5,683,789	5,717,393

#### Car Loading in Canada

Car loadings in Canada continued to increase and for the week ended March 7 amounted to 45,410, as against 45,263 cars for the previous week, according to the compilation of the Dominion Bureau of Statistics. The total was also 3,587 above that of 41,823 for the corresponding week last year.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
March 7, 1936.....	45,410	24,900
February 29, 1936.....	45,263	24,730
February 22, 1936.....	43,566	22,187
March 9, 1935.....	41,823	24,168
Cumulative Totals for Canada:		
March 7, 1936.....	412,327	224,498
March 9, 1935.....	424,974	224,594
March 10, 1934.....	405,354	222,434

# Floods in East Cause Widespread Damage to Rail Lines

Washed-out lines and inundated terminals cause serious interruptions to service throughout Middle Atlantic States—New England also affected

**D**ISASTROUS floods, resulting from heavy rains on top of melting snow and ice, have caused widespread damage to railway property and interruptions to railway service in Middle Atlantic and New England States and in eastern Canada during the past week. While the flood conditions were most serious in the region around Pittsburgh, Pa., and Johnstown, and Cumberland, Md., New England railroads also reported considerable damage.

Western Pennsylvania, particularly within a 100-mi. radius of Pittsburgh, on March 17 and 18, suffered the worst floods on record. The Monongahela, Allegheny, Ohio and Conemaugh rivers exceeded flood stage by 10 to 25 ft.

The Pennsylvania, the Baltimore & Ohio, the Pittsburgh & Lake Erie, the Pittsburgh & West Virginia and the Wheeling & Lake Erie were seriously affected. Through travel east and west was completely blocked for many hours, and some branches were abandoned.

At Pittsburgh the rising Monongahela and Allegheny rivers inundated the city's principal business streets, flooding railway stations with water up to 5 ft. in depth. Freight cars were practically covered along the waterfront. Similar conditions prevailed at Johnstown and Cumberland and at Wheeling, W. Va. At the latter point 5 ft. of water was in the Baltimore & Ohio's passenger station on the forenoon of March 18.

At Johnstown, Pa., damage was as great as that in the disastrous flood of 1889 except that fewer deaths were reported. The town was completely abandoned, and the refugees were faced with a food and water famine; power, light, heat and communications were cut off. The railroads began Tuesday night trying to break through with food, bedding, boats and supplies, and to pour thousands of carloads of filling material into washed-out areas in order to re-establish main line through service.

Extending east as far as Harrisburg and north to Williamsport, flood conditions in the Juniata river and its many tributaries undermined and washed out thousands of feet of tracks on the Middle and Williamsport divisions of the Pennsylvania, taking with them thousands of feet of telephone and signal lines. Signal systems in all affected areas are demoralized. While it is expected that train service will be restored on all main lines under restrictions within a reasonable period of time, complete repairs, which are estimated to cost several millions, will require weeks.

The foregoing situations seriously disrupted the New York-Chicago services of the Pennsylvania and the B. & O. Pennsylvania trains on this route were on March 17 and 18 rerouted over the New York Central and the Lehigh Valley, the Broadway Limited being among those run into Grand Central Terminal, New York.

In addition to the trouble at Pittsburgh, the Pennsylvania reported that its main-line tracks were under water

at Johnstown and that several bridges were washed out between Renovo, Pa., and Emporium, thus forcing the rerouting of its Buffalo, N. Y.-Philadelphia, Pa., trains over the Lehigh Valley and Reading.

On March 19 the Pennsylvania reported its lines still out of service between Altoona and Lancaster.

The Baltimore & Ohio experienced serious difficulty with several bad washouts around Cumberland, Md., and with high water on the east end of its Cumberland division. On March 18 the Shenandoah river was rising rapidly and threatened the trestle at Harper's Ferry, W. Va. Also, its tracks at Allegheny, Pa., were under water. Conditions of its line were such that on March 18 the B. & O. was unable to do any through business New York-Chicago over normal routes. Its line from New Castle, Pa., to Chicago was open and through trains were detoured to or from the former point. This road also detoured some trains over the Chesapeake & Ohio between Washington and Cincinnati.

The chief difficulty experienced by the New York Central occurred Friday, March 13, at Schodack Landing on the main line, about nine miles south of Albany, N. Y., where an ice gorge in the Hudson river broke suddenly and carried huge blocks of ice over the four tracks. Trains were detoured over the A. H. Smith Memorial Bridge at Castleton and over the Boston & Albany tracks, with consequent delays of from one to two hours. High water on the Pennsylvania division caused delay in traffic for 24 hours. Commuting trains on the Putnam division were suspended on March 12 for about 10 hours while the track near Millbrook that was being undermined by a flooded brook was strengthened.

This road also experienced delays due to a 4-ft snowfall between Buffalo and Cleveland and southeast to the Big Four. On March 19 it reported high water at various places on the eastern part of the main line, and as a precautionary measure train operation was slowed down to 30 m. p. h.

The Reading reported that it had experienced some trouble at Williamsport, Pa., and Allentown. The situation was described on March 13 as nothing serious. Later, on March 19, this road reported some trouble from flooded tracks north of Shamokin, Pa.

The Erie reported damage estimated at from \$12,000 to \$15,000. There was no serious interference with service except on the night of March 11 and the morning of March 12, when some detouring was necessary. There was some slight interference with traffic in the New York suburban area. This week there were some interruptions to service, and at various points operations on alternate tracks were necessary. The Erie line is through to Chicago, operating under these conditions; on March 18 a Pennsylvania train, westbound, was operated over the Erie tracks from Waverly, N. Y., to Akron, Ohio.

The Lehigh Valley, at first reporting practically no damage and very little delay on its main line and only

minor interruptions to services on its branch lines, later encountered high water at various points along the Susquehanna river between Towanda, Pa., and Wilkes-Barre. On March 18 it detoured some of its passenger trains over the Lackawanna and the Erie between Waverly, N. Y., and Pittston, Pa. It expected to resume services on March 19.

There was no interference with main line service on the New York, Ontario & Western. Its Scranton branch was tied up between Jermyn and Mayfield on March 19, but the tracks were open later in the day. The Monticello branch was more seriously affected. Some delay was occasioned by a landslide on the West Shore south of Cornwall, N. Y. The Delaware & Hudson suffered only slight damage due to a few washouts, with some delay to trains. The Central of New Jersey encountered high water in the vicinity of Wilkes-Barre, but reported no interruptions in train service.

The Delaware, Lackawanna & Western's line from Scranton, Pa., to Northumberland was out of service for about 24 hours because of high water, which also caused trouble at Rupert, Pa., where the line was out of service for 12 hours. More high water was encountered at Bath, N. Y., but here there was no interruption of service. East of Delaware Water Gap, at Slateford Junction, along the Delaware river, both tracks were under water for about 16 hrs. During this time through trains were detoured over the Lehigh Valley from Phillipsburg, N. J., to Pittston, Pa. The Ithaca branch from Owego, N. Y., to Ithaca was out of service for about a day and further trouble was encountered on March 18 at Syracuse, N. Y., and Utica.

#### Conditions in New England

The Boston & Maine and the Maine Central reported widespread damage on both lines, with no estimates as to the total cost except that they will be heavy for both roads. The Maine Central lost a four-span, 750-ft. bridge carrying one of its main lines between Brunswick and Topsham. Service is being maintained by using the other main line between Portland and Bangor via Lewiston and Winthrop. Buses of the Maine Central Transportation Company are providing passenger service to Augusta, Gardiner, Hallowell, and Richmond over the highway from Winthrop. A freight shuttle service is being provided from Waterville to Augusta and down the line as far as the bridge which has been washed out.

By Monday of this week all Boston & Maine lines were in service except the line between White River Junction, Vt., and Wells River and the Pemigewasset branch between Plymouth, N. H., and Lincoln. Service has not been affected by the tie-up between White River Junction and Wells River because detour routes are being used. All Maine Central lines have been re-opened, but with an entire re-arrangement of passenger schedules, consolidating some trains and putting on some new ones, since all through service is now being operated via Lewiston.

The New Haven reported practically all its lines, other than its main lines, had been affected by the flood conditions last week, the road suffering 45 minor and 15 major washouts, delaying train services considerably. Repair costs are estimated at from \$150,000 to \$200,000, with flood conditions still prevailing early this week. On Wednesday evening high water was experienced at Thompsonville, Conn., on the Springfield line between Hartford, Conn., and Springfield, Mass., making it necessary to cease operation between those points. Prior to the flood condition at Thompsonville, trains of

the Boston & Albany were being re-routed over this division of the New Haven. The flood condition at Thompsonville, however, necessitated re-routing the trains via New Haven's shore line right through from Boston to New York. Branch lines on which washouts and other flood conditions interrupted services included the Berkshire line, the Naugatuck line, the Canal line, the Winsted line, the Norwich line and the Willimantic line.

Wherever possible when passenger services were interrupted by flood conditions the New Haven detoured passengers around via New England Transportation Company buses. At time of going to press, the Connecticut river was reported as still rising and gave indications that the water would reach at least the same high mark as in November, 1927.

The Central Vermont reported that damage on its Northern division, northward from White River, Vt., were negligible and that operation was continued throughout the high water with only slight delay. On the Southern division, however, between Willimantic, Conn., and Stafford, four minor washouts occurred and another one 1,000 ft. long along the Willimantic river, which interfered with through operation for approximately 30 hours. All traffic was restored to normal on the morning of March 14.

Flood conditions prevailed in the Rutland territory from March 11 to March 14. An ice jam on the Williams river at Chester, Vt., caused water to cut through a railroad embankment taking out a culvert and resulting in a washout 1,000 ft. long with a maximum depth of 15 feet. Several minor washouts were suffered between Bennington, Vt., and Chatham, N. Y. Service was suspended on the Bellows Falls sub-division and on the Chatham subdivision for four days, and on the main line for 24 hours, on account of high water at Pittsford, Vt. The cost of the damage, including loss of revenue, is estimated at \$25,000.

On the Boston & Albany high water near Chester, Mass., and Huntington caused a rerouting of some trains over the New Haven.

In Canada, the Canadian Pacific reported no serious flood damage in Ontario and Quebec. The Canadian National had some difficulties with train operation in Eastern Canada from March 12 to March 16. No serious damage was reported, but some temporary slow orders and some local detouring were necessary to maintain service. A heavy snow storm with drifting on the Port Arthur division and Hornepayne territory of Northern Ontario on March 12 delayed service and this storm, accompanied later by rain, spread eastward to the Laurentian division in Quebec causing a number of landslides, but with only temporary interruptions to services. On the Belleville division in Eastern Ontario, snow and rain storms brought flooded tracks which delayed services from a few minutes to several hours. At Toronto the overflowing of the Don river necessitated the detouring of some trains over the New Market sub-division. Washouts on the Smiths Falls sub-division and high water on the Tweed sub-division in Eastern Ontario caused temporary interruption in services between Belleville, Ont., Napanee and Ottawa. Landslides to snow, ice and mud occurred on the lines in the Murray Bay region of Eastern Quebec and similar difficulties were experienced on the Grand Mere and Latuque sub-divisions, with a steel bridge near Grand Mere being temporarily dislocated. On March 14 a washout occurred near Oxford Junction on the Spring Hill sub-division in Nova Scotia blocking traffic until the following day. Train operations were restored to normal by the beginning of this week.

# Communications and Books . . .

*The Railway Age cannot publish letters from readers who do not supply their names and addresses. Names of correspondents are not published, or disclosed even upon inquiry, unless the correspondent consents. But they must be given us as an evidence of good faith.*

## A Safe Division

AURORA, MO.

TO THE EDITOR:

The White River division of the Missouri Pacific, with 550 employees, is small, but it presents difficult operating problems. It has grades of more than 1 per cent, curves up to 15 deg., and many 6-deg. curves, with bridges as high as 121 ft. Nevertheless, this division led the railroad in safety in 1934 and in 1935, with only one reportable injury each year. In fact, we operated 22 months, between January 2, 1934, and November 13, 1935, without a single reportable injury.

Our formula is to sell the safety idea to the employees singly and collectively, stressing rule observance. This is like food and drink; it must be taken every day, every trip and each supervisor on the division talks practical safety not once a week or once a day, but many times daily, and each crew is handed a safety suggestion with every train order it receives.

J. K. HOBBS,  
Trainmaster.

## Young Men and the Railroad Industry

TO THE EDITOR:

In the issue of December 28, I chanced to read an article written by a C. A. Warner, entitled "Railroads Need Young Men," at the conclusion of which the writer solicits the opinion of others in the matter.

To me this article was quite interesting and perhaps it appealed to me mostly because I too come from a family of railroad people, my father having been a terminal superintendent at one time, and one might say that "railroading" was in my blood. However, the closest that I could ever get to being a railroad man was to become connected with one of the largest steel foundries and railway equipment plants in the east. After years of education and elementary experience, I have finally attached myself to an industry in which a young man of my capabilities is most suited and in which I am extremely interested, as could be substantiated by my superiors.

Quite incidentally my experience parallels that of Mr. Warner's in that I was also urged to "keep away from the business of railroading." Many old timers and fellow-workers occasionally discourage me in my present work with similar remarks. These conservatives do not deter me from my purpose and I am often quite proud of this fact because the average young man is not attracted to the railroad business or to the foundry industry, although they do offer promising opportunities.

Mr. Warner mentions that young men of exceptional ability and character are needed to combat the radical changes and intense competition existing today. Let me use this medium to express the views of the younger man by taking issue with Mr. Warner, who states that "the man who is \* \* \* in love with his work \* \* \* and sold on his job \* \* \* is the man who gets the money and moves along." There are many exceptions to this rule and regardless of the initiative and ability displayed by the young man, he is often overlooked. We will agree that the law of seniority rights is a powerful factor in preventing the young man from forging ahead because a self-satisfied older man has the next position and so long as the regular pay day comes around he has no desire to further himself, thereby restraining the deserving man. These, I believe, can be considered as two of the most outstanding reasons why a young man shys from the aforementioned industries.

Due to the closely allied relations between the railroads and the railroad equipment industry, it is not hard to see that when one prospers, the other does and vice-versa. It seems to me, and

I like to believe, that present-day conditions demand of these businesses that they absorb young men who are not snarled up in a lot of inhibitions and who have imagination. Although it is not my particular position with my company, I have often written articles for the press urging public sympathy and support of the railroads' problems. By so doing I have elicited much favorable comment and have to a certain extent made the local populace "railroad-minded," to say nothing of the good-will and prestige it has brought the company.

The writer would appreciate the editor's comments on young men in these fields and the readers' viewpoint.

W. F. SAUNDERS.

## A Voice in the Wilderness

CHICAGO.

TO THE EDITOR:

My department consists of 82 salesmen covering the United States. As a lifelong railroad enthusiast, I have been endeavoring for years to induce our men to use the railroads in their travels wherever possible, but I have been as the voice crying out in the wilderness, insofar as any co-operation from the railroads themselves is concerned.

In the past five years, not one single railway passenger representative has called at this office, except occasional messengers delivering tickets ordered on our own initiative. As one who knows something about sales, I feel that I am safe in saying that no other industry has thus neglected 82 good customers, especially in these depression years.

Moreover, not only has the searching for prospects been weak, but the sales efforts after the prospects have taken matters into their own hands have been lamentable. Within the past two months, I succeeded in convincing two of my men who had intended to drive south that rail travel was preferable. What happened? The one who went to Florida was given a coupon reading Florida East Coast from Miami to Tampa, where the F.E.C. does not run. Wishing to go from Tampa directly to Atlanta, his coupons read Seaboard Air Line from Tampa to Jacksonville, and Central of Georgia from Thomasville to Atlanta, with a gap between Jacksonville and Thomasville, even if my man wanted to go that way, which he didn't.

The other man went to Houston, returning via Shreveport. He was given a coupon reading from Shreveport to St. Louis, via a railroad that has no through service between those two points, and which required him to get up in the middle of the night at Pine Bluff and wait there until the next afternoon for the train to St. Louis.

Perhaps the railroads are proceeding on the basis of caveat emptor, but if the buyer must beware, he will soon stop buying.

GENERAL SALES MANAGER.

## New Book

*Federal Motor Carrier Regulation*, by Parker McCollester and Frank J. Clark. 340 pages, 9 in. by 5 3/4 in. Bound in cloth. Published by the Traffic Publishing Company, New York. Price \$4.

The aim of this book is to present an analysis of the Motor Carrier Act, 1935, indicating its scope, those affected thereby, the character of its requirements, the nature of the Interstate Commerce Commission's regulatory authority and some legal questions which may arise in the process of enforcement. As a background for this comprehensive survey, which comprises three-fourths of the volume, there are included introductory sections on the development of the motor carrier industry and the highlights of state regulation thereof.

Dealing factually with federal regulation as it actually is, the authors venture neither into speculation as to its desirability nor prophecy as to its outcome. The act, they suggest in the preface, brings to the fore many such questions, with "much to be said on both sides;" but, so far as the present work is concerned, these are "left to the future."

# Odds and Ends . . .

## Rates of Pay

The Norfolk & Western recently unearthed a payroll, dated October, 1857, which indicates that carpenters received \$1.25 per day; brick masons, \$2.50; gang bosses, \$3.25; and laborers, \$1.00—and the work day was 12 hr. long.

## More Longevity

J. M. Davis, president of the Delaware, Lackawanna & Western, calls attention to that railway's record in passenger department longevity, which compares favorably with the others noted in this department previously. The heads of the Lackawanna's passenger department have been as follows:

W. F. Holwill, 1872-1899.

T. W. Lee, 1900-1905.

G. A. Cullen, 1906-1920.

W. F. Griffiths, 1920-to date.

## Get Off and Push

W. G. Besler, chairman of the board of the Central of New Jersey, sends in a reproduction of a ticket issued by the Elizabethtown & Somerville about 1848, which contains the following provision: "The passenger to assist the conductor on the line of road whenever called upon." Mr. Besler also recalls that an old-timer once informed him that, on rainy days on a summit on the Chicago, Burlington & Quincy in Missouri, it was the regular practice to require all male passengers to stand on the car steps going over the hill and, if the locomotive stalled, it was their duty to hop off and push.

## Crickets

A recent issue of the *Railway Age* told of the introduction of crickets into Grand Central station, New York, to lend proper atmosphere to a rural exhibition. At the union station in Springfield, Mass., completed and opened nine years ago, crickets are a regular, though intermittent, source of good cheer. From almost the first year of the station's existence, crickets have been heard at intervals in the transverse passenger subway from some concealed position, which has appeared to be inside or close to the base of one or more of the train indicators. No one knows of any occasion when one of the crickets was seen, although once when work had to be done under the walls some of the men

tried in vain to find one. Springfield's station crickets were not introduced for any purpose; they came of their own accord, and took up positions at the foot of the train indicators as if they were giving vocal expression to the information printed thereon.—Springfield Republican.

## His Majesty, the Locomotive

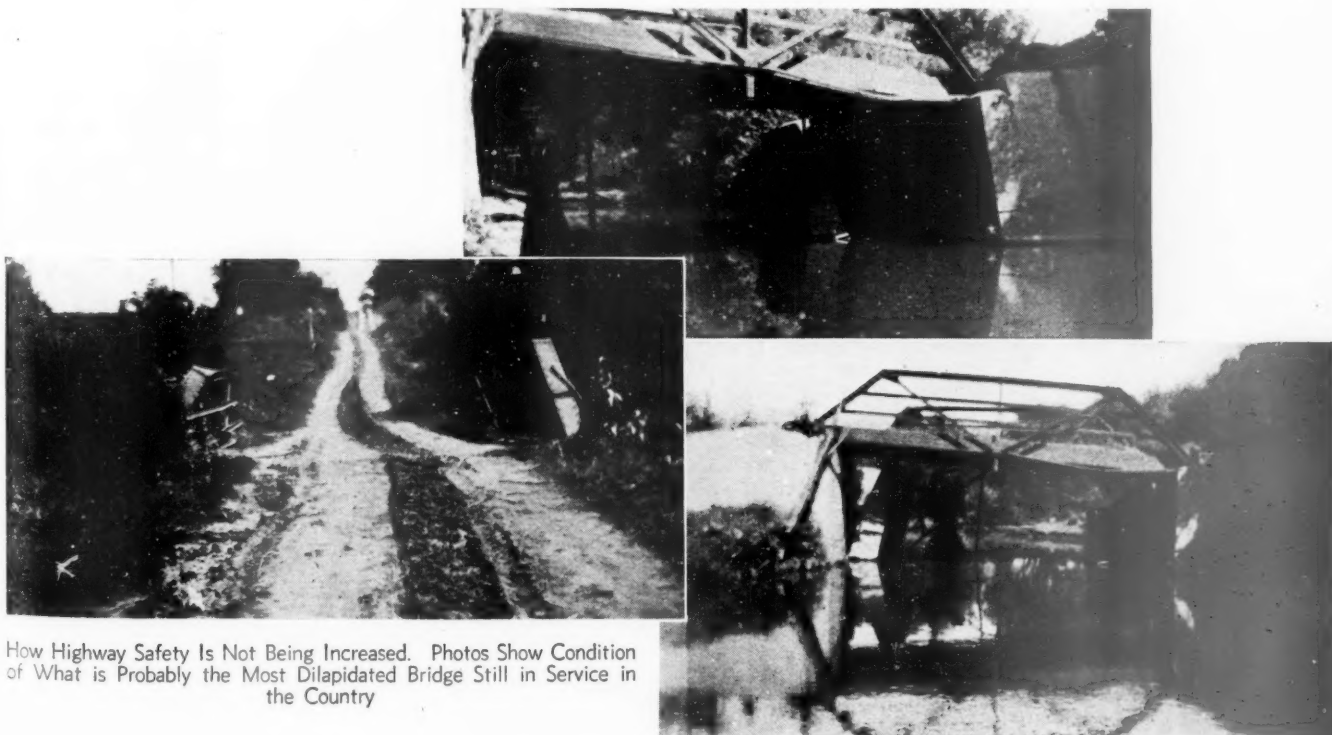
John W. Cooper, of Los Angeles, sends in the following editorial from the Kansas City Star:

Maybe, as modernization trickles down through cities and villages to the crossroads, Old Timer may come to accept and welcome the streamline train with its wind-splitting nose, its jointed contour, its flash of stainless metals and its soft-toned whistle which, in reality, is a horn. Maybe he can adjust himself, as he stands at the crossroads, to the absence of cinders falling about him, to the absence of acrid coal smoke. Maybe he can, eventually, reconcile himself to the idea of speed minus the rattle and clatter incident to the slap-bang progress of a heavy locomotive over high joints and planked crossings.

But away back of his acquired modernity will remain a respectful appreciation of the majesty of the steam locomotive. The steam locomotive is something to catch and hold the imagination with its high, spinning wheels, its flying piston bars, the befuddling motion of its eccentric rods, its steam-inspired whistle echoing from hill to hill, the staccato of its exhaust and the momentary glimpse of a head and shoulders leaning from the swaying and pitching cab. Progress is desirable, it is necessary. The streamline train is a thing of beauty as it rockets around curves and through cuts. It is putting the railroads back in the category of passenger transportation agencies. But it is as the swallow is to the eagle when compared with the lurching, puffing, rail-hugging, roaring and onward-plunging steam locomotive. Old Timer will glance at the streamliner but he will wait at the crossing for the passing of His Majesty, the locomotive.

## Our Bridge Department

R. G. Kenly, chief engineer of the Minneapolis & St. Louis, sends in the accompanying illustrations as being of interest to bridge fans of the structural rather than the contract variety, claiming for this highway bridge the doubtful distinction of being the most dilapidated bridge still in daily use.



How Highway Safety Is Not Being Increased. Photos Show Condition of What is Probably the Most Dilapidated Bridge Still in Service in the Country

# NEWS

## I. C. C. Rejects Lumber Rates Proposed for Official Territory

The Interstate Commerce Commission, in a report by Division 2, has found not justified the proposal of railroads in Official classification territory to substitute sixth-class rates for commodity rates on lumber. The order cancelling the proposed schedules is, however, without prejudice to the establishment of lumber rates on the basis of 25 per cent of the corresponding first-class rate, minimum 36,000 lb., which the commission finds to be a reasonable maximum.

The majority report was written by Chairman Mahaffie. Commissioner Splawn, dissenting in part, agreed that the suspended tariffs should be cancelled but was unable to agree "that mileage rates on the basis of 25 per cent of the corresponding first class rates have been justified." Their establishment, he said, "will completely disrupt long-established groups and relations."

The report also found the carriers' proposed lumber list reasonable but required the inclusion of walnut and cherry lumber therein. The conclusions of the majority follow in part:

"Defendants cite numerous cases in which we have held that sixth-class rates were not unreasonable as applied to lumber between points in official territory, but none of such cases is of major importance from the standpoint of movement.

"The general level of lumber rates in New England may be said to be about the same as the Dutton scale, which is 23.4 per cent of the zone A first-class rates. This does not include round edged lumber which takes a lower basis. The general level of lumber rates in trunk-line and central territories is difficult to determine. As near as we are able to determine the level in trunk-line territory is between 22.5 and 27.5 per cent of first class. In central territory the general level is about 92 per cent of sixth class, or about 25.3 per cent of first class.

"The carriers have made it clear that they desire to put lumber rates upon a mileage scale, notwithstanding the fact that a majority of shippers oppose such a basis. Many competitive relations will be destroyed if the rates here in issue are placed upon a mileage basis, but such changes are inherent in any general revision. In many cases we have found that groupings of origins and destinations were not unreasonable or unduly prejudicial, but where the carriers have indicated that they desire to put the rates on a strictly distance basis, we have seldom prevented them from doing so. The rates which we will prescribe will be reasonable maxima only. No doubt many unduly

prejudicial situations and fourth section violations will be created as between rates from the border points and rates from other territories. These situations must be dealt with individually. Reasonable groupings may be retained.

"The evidence is convincing that the application of sixth class generally on lumber within official territory would increase such rates beyond a reasonable maximum. It would disrupt long standing competitive relationships, create unduly prejudicial situations and result in new violations of the long-and-short-haul clause of the fourth section.

"We find that the proposed lumber list will be reasonable, but that the omission from the lumber list of walnut and cherry lumber would be unreasonable and unduly prejudicial to shippers of those articles and that such omission from the lumber list has not been justified.

"We further find that respondents have not justified the suspended schedules and they will be ordered canceled, without prejudice to the establishment of rates made on the basis of 25 per cent of the corresponding first-class rates, minimum 36,000 pounds, which we find to be a reasonable maximum. The establishment of such maximum reasonable rates will dispose of the allegation of undue prejudice as between the rates from Norfolk and Baltimore."

## Rates to Meet Truck Competition Suspended

The Interstate Commerce Commission has suspended for investigation the schedules published by Agent L. F. Potter proposing reduced rail rates to meet motor truck competition on petroleum and petroleum products between California points and from California to destinations in Arizona and Nevada. The effective date of the proposed schedules has been suspended from March 18 to October 18.

## Chicago Traffic Club Elects Officers

Officers elected for the ensuing year by the Traffic Club of Chicago on March 17 are as follows: President, J. W. Bingman, traffic manager of the Corn Products Refining Company; first vice-president, J. E. Weller, traffic manager of the Pennsylvania; second vice-president, R. W. Campbell, manager, traffic department of the Butler Paper Corporations; third vice-president, W. C. Douglas, assistant general freight traffic manager of the New York Central; secretary, D. W. C. Becker, director, traffic management department of the LaSalle Extension University; and treasurer, R. J. Wallace, traffic manager of the Jaques Manufacturing Company.

## Treble Damages Against Pennsylvania and Warehouse Company Disallowed

For many years the Pennsylvania had a contract, renewed periodically, with the Merchants Warehouse Company, Philadelphia, by which the railroad agreed to maintain tracks adjacent to the warehouse and to make payments at stipulated rates for services rendered by the warehouse in the receipt and delivery of freight. While the contract was in force, there was to be no allowance for such services to any other warehouse company in Philadelphia. In return Merchants agreed to give a preference to Pennsylvania over other lines in the use of its facilities; to load and unload freight promptly and efficiently; to collect charges due for incoming freight, and to be responsible to the railroad company therefor.

All this was set forth in the railroad's tariffs, with additional details. For many years the practice went unquestioned, under decisions of the Interstate Commerce Commission. In 1928 the Commission ruled, in *McCormick Warehouse Co. v. Pennsylvania* (148 I.C.C. 299) that a warehouse company doing business under such a contract was a consignor or consignee, acting on its own behalf and not as agent for the carrier. With this change in its relation, discriminatory payments or allowances became forbidden and unlawful.

The Terminal Warehouse Company, a rival warehouse, after considerable litigation before the Interstate Commerce Commission, where it charged the Pennsylvania with unjust discrimination in the practices described, brought suit under the Sherman and Clayton Acts to charge the Merchants and the railroad with treble damages resulting from the allowances for loading and unloading or like discriminatory acts. On the question of whether Terminal was a sufferer from an unlawful combination in restraint of trade and commerce a jury found a verdict for \$136,125 against both defendants. This verdict was trebled by the trial court, the whole judgment amounting, with a counsel fee of \$27,000, to \$437,338.81.

This judgment was reversed by the Third Circuit Court of Appeal, 78 F. (2d.) 291, on the ground that a prior decision of the Commission, refusing reparation, and merely making a "cease and desist" order in respect of publication of the discriminatory privileges and allowances (*Gallagher v. Pennsylvania*, 160 I.C.C. 563) was a bar to any claim for damages against either of the defendants in a suit under the anti-trust laws as well as under the commerce act.

The latter judgment has now been af-

# MODERN POWER—

## *A Profitable Solution*



Railroad transportation today is a business of delivering more service than the next best transportation means. « « « This demands high capacity at high speeds. « « « Modern locomotives alone provide these elements. « « « In addition they provide comfort and safety at a cost that shows increased net returns.

**LIMA LOCOMOTIVE WORKS,  
INCORPORATED, LIMA, OHIO**



firmed by the Supreme Court of the United States. That court holds that there was no conspiracy to monopolize the storage business to the destruction of rivals, or to impose upon the business a burden of any kind except to the extent that the enjoyment of a preference might increase the opportunities for profit of the warehouse so preferred. "On the contrary," the court said, "the history of the relation between Pennsylvania and Merchants indicates strongly that the illegal discrimination, far from being a symptom of a larger combination, was the product of a mistake of law, which was shared for many years by the regulatory commission till the decision in McCormick's case laid down another rule. The mistake does not relieve the carrier from liability for the concession of a privilege which has turned out to be forbidden. It serves, however, as a reminder that the liability must be kept within reasonable limits, and that a preference innocent in purpose should not be magnified into a token of a circumambient conspiracy.

"We conclude that for Merchants as well as for Pennsylvania whatever liability was incurred through the forbidden discrimination was under the act to regulate commerce and not for treble damages.

"The Commerce Act like the Shipping Act embodies a remedial system that is complete and self-contained. It provides the means for ascertaining the existence of a preference, but it does not stop at that point . . . it gives a cause of action for damages not only against the carrier, but also against shippers and consignees who have aided or abetted. For the wrongs that it denounces it prescribes a fitting remedy which, we think, was meant to be exclusive. If another remedy is sought under another statute, there must be a showing of another wrong, not canceled or redressed by the recovery of damages for the wrong explicitly denounced."—Terminal Warehouse Co. v. Pennsylvania. Decided March 2, 1936. Opinion by Justice Cardozo.

#### Associated Traffic Clubs

The semi-annual convention of the Associated Traffic Clubs of America will be held at New Orleans, La., on April 28-30.

#### R. R. C. Promotions

Daniel Willard, Jr., counsel for the Railroad Credit Corporation, has been elected vice-president and general counsel, and E. G. Taylor has been elected comptroller. Mr. Taylor succeeds the late Eugene R. Woodson.

#### Mo. P. Establishes Fast Train Between Kansas City and Salina

The Missouri Pacific has established a new train between Hoisington, Kan., and Kansas City, via Salina, on a schedule of 4 hr. 25 min. for the 221 miles between Salina and Kansas City (50 m.p.h.). The train has a dining and a parlor car, chair cars and coaches. Dining car meals are served to coach passengers at reduced prices, food being served at a counter or by tray services at seats. The train leaves Hoisington at 7:30 a.m. and Salina at

11:45 a.m. and arrives in Kansas City at 4:10 p.m. Returning, it leaves Kansas City at 4:30 p.m. and arrives in Salina at 8:55 p.m. and Hoisington at 11 p.m. The train makes seven stops between Kansas City and Salina.

#### New Loading Rules

The Transportation division of the Association of American Railroads has issued new rules for the loading of machinery, butter in tubs and empty cylinders when handled in carload lots, publishing them as supplements to its pamphlet of recommended methods for the loading of commodities in closed cars.

#### Special Meeting of N.I.T. League

A special meeting of the National Industrial Traffic League has been called for March 31 in Washington, D. C. Developments concerning highway transportation, Ex Parte 115, the petition of the railroads to make permanent the surcharges which expire on June 30, and the pending federal transportation legislation will be discussed.

#### Intrastate Rates in Montana

The Interstate Commerce Commission, in a report by Commissioner Porter, has found that the failure or refusal of Montana authorities to permit increases in intrastate rates along the lines of the Ex Parte 115 emergency charges results in no undue or unreasonable preference or advantage, nor in undue, unreasonable or unjust discrimination against interstate or foreign commerce. Accordingly the proceeding inaugurated on petition of the carriers has been discontinued.

#### Pacific Northwest Shippers' Board

The Pacific Northwest Shippers' Advisory Board will hold its next meeting at Portland, Ore., on March 27. Government ownership will be discussed from the viewpoint of the shipper by Colonel W. B. Greely, secretary-manager of the West Coast Lumbermen's Association, and from the viewpoint of the railroad man by H. G. Taylor, chairman of the Western Association of Railway Executives. A. M. Groseclose, traffic manager of Gwin, White & Prince, will talk on methods of preventing loss and damage. J. E. Gould, professor of transportation of the University of Washington, will analyze the motor carrier act.

#### Loss and Damage Increases

Freight loss and damage payments by Class I carriers during 1935 showed an increase of 5.4 per cent, or \$912,018, as compared with 1934, according to preliminary figures prepared by the Freight Claim division of the Association of American Railroads. The total for 1935 was \$17,946,049, as compared with \$17,034,031 in 1934. Unlocated damage increased 33 per cent, or from \$6,127,267 in 1934 to \$8,147,267 in 1935. Other increases were in concealed damage, 17.6 per cent; wrecks, 5.3 per cent; delay, 2 per cent; freezing or heater failure, 6.9 per cent; improper handling, loading, etc., 6.6 per cent; fire or marine loss or damage, 2 per cent; and concealed loss, 5.9 per cent. Those causes

showing decreases were rough handling, 33 per cent; defective equipment, 5.1 per cent; other unlocated loss, 4.9 per cent; loss of entire package, 6.7 per cent; robbery of entire package, 18.6 per cent; robbery other than entire package, 18.6 per cent; error of employee, 10.3 per cent; and improper refrigeration or ventilation, 8.2 per cent.

#### Further Hearings on Ex Parte 115 Surcharges

After overruling on March 11 motions to dismiss the railroads' petition for continuation beyond the June 30 expiration date of the Ex Parte 115 emergency freight charges, the Interstate Commerce Commission on March 14 announced dates for further hearings in the case. The schedule follows:

Fort Worth, Texas, March 26, at the Texas Hotel, before Commissioner Splawn.

Boston, Mass., March 26, at the Hotel Lenox, before Commissioner Aitchison.

Salt Lake City, Utah, March 30, at the Utah Hotel, before Examiner Hosmer.

Atlanta, Ga., April 2, at the Atlanta Biltmore Hotel, before Commissioner Aitchison.

Minneapolis, Minn., April 3, at the Nicollet Hotel, before Examiner Hosmer.

Chicago, Ill., April 7, at the Morrison Hotel, before Commissioner Aitchison.

Washington, D. C., April 15, at the office of the Interstate Commerce Commission, before Commissioner Aitchison.

#### Appropriation for Florida Canal Refused by Senate

An appropriation of \$12,000,000 for construction of the proposed ship canal across Florida, proposed in an amendment to the War Department appropriation bill, was voted down by the Senate on March 17. Similar action had been taken when the bill was under consideration in the House. Congress has never authorized the construction of the canal, the cost of which has been estimated at from \$146,000,000 to \$200,000,000, but a beginning of the work has been made with a \$5,000,000 allotment of public works funds and efforts have been made to extend it by piece-meal appropriations.

#### Club Meetings

The Railway Club of Pittsburgh (Pa.) will hold its next meeting at the Fort Pitt Hotel, Pittsburgh, on Thursday evening, March 26. E. W. P. Smith, of the Lincoln Electric Company, Cleveland, Ohio will speak on applied welding.

The Car Foremen's Association of Chicago will hold its next meeting at the LaSalle Hotel, Chicago, on Monday evening, April 13. G. N. Kelly, of the United Fruit Despatch Company, will speak on development of the refrigerator car in the banana industry. The address will be illustrated by motion pictures, with sound equipment.

The Western Railway Club will hold its next meeting at Hotel Sherman, Chicago, on Monday evening, April 20. Purchases and stores will be the subject for consideration, with a paper by G. E. Scott, purchasing agent, Missouri-Kansas-Texas.

The New England Railroad Club will

*Continued on next left-hand page*

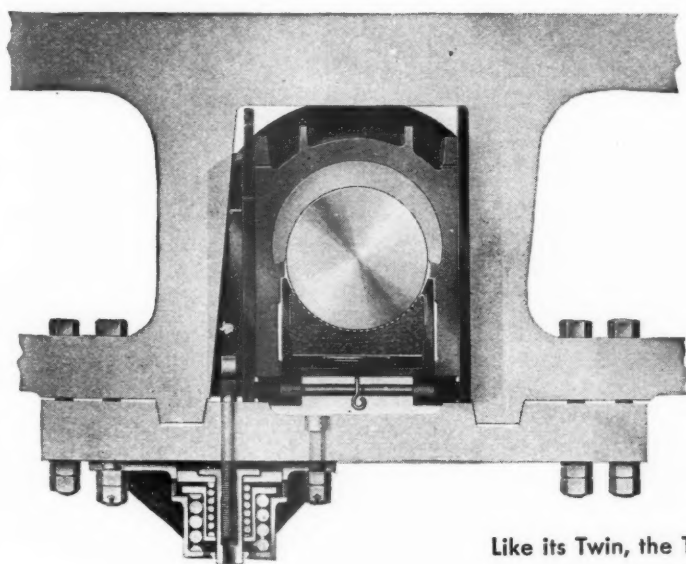
**YOU CANNOT HAVE**

*Both*



**WITH A HAND-  
ADJUSTED WEDGE**

With a surface bearing, driving box temperature varies as much as 250° over short periods of time. Driving box size varies correspondingly.



No matter how perfectly the driving box wedge may be adjusted by hand, it is either too loose when the box is cold or too tight when the box expands. It cannot be right for both.

Franklin Automatic Compensator and Snubber automatically compensates for temperature change as well as wear. The wedge member automatically eases downward as the box expands and upward as it cools. The correct adjustment is always automatically maintained. The snubber member yields only to unusual shocks which avoids all possibility of excessive strains.

Like its Twin, the Type E-2 Radial Buffer, it is one of the most effective devices in maintaining proper adjustment, easy riding and low maintenance costs.



When maintenance is required a replacement part assumes importance equal to that of the device itself and should be purchased with equal care. Use only genuine Franklin repair parts in Franklin equipment.

**FRANKLIN RAILWAY SUPPLY COMPANY, INC.**

NEW YORK

CHICAGO

MONTREAL

hold its next meeting at the Copley-Plaza Hotel, Boston, on Tuesday evening, April 14. This will be Signal Night, and A. H. Rudd, of the Pennsylvania, will speak on cab signals and Burt T. Anderson, on special requirements for signaling for high-speed trains. These addresses will be illustrated by new lantern slides in colors.

### Examiner Finds Pacific Electric Not Exempt from Labor Act

Examiner Earl M. Steer, in a proposed report, has recommended that the Interstate Commerce Commission find that the Pacific Electric is not outside the scope of the Railway Labor Act under the provision exempting street, interurban or suburban electric railways. The road took the position that it was exempt, but the proposed report says its representatives "stated they did not consider the question of any real importance," and no brief was filed.

The Examiner reviewed the Pacific Electric operations and its tie-up with the Southern Pacific and concluded that it is operated as a part of a general steam-railroad system and is therefore not exempt.

### Hearing on Lake Erie-Ohio River Canal Proposal

The Board of Engineers for Rivers and Harbors of the War Department will hold a public hearing in Washington, D. C., on March 30 on the latest report of district engineers on the proposed canal to connect Lake Erie with the Ohio river.

"The reporting officers," the announcement says, "find that a canal via the Beaver Mahoning and Grand rivers from Beaver, Pa., to the vicinity of Ashtabula, Ohio, is the only one affording general benefits commensurate with the required expenditures. The Board, after due consideration of the reports, is not convinced of the advisability of the proposed improvement."

The hearing is designed to give interested parties an opportunity "to present any data bearing on the advisability of constructing a canal to connect Lake Erie and the Ohio river, on the route recommended by the District and Division Engineers or any alternative route."

### Pennsylvania Safety Record

The Pennsylvania announces that its safety records for 1935 show an average of 5.1 injuries, fatal and non-fatal, to employees, per million man-hours worked. The contests between different divisions and different departments were started in 1927, and in that year the average was 19.1, showing a reduction in eight years of 73 per cent.

For 1935, the record on the New York zone was 4.20 reportable casualties to employees per million man-hours worked in all departments. As 1,000,000 man hours are equivalent to about 400 men working normal full-time for a year, the "average" employee in the New York zone would figure in the accident record each 100 years.

At the Altoona Works, for 1935, the record, which includes only persons employed in maintenance of equipment, was

1.83 per million man-hours, equivalent to one reportable mishap for every 2¼ centuries of work per man.

### Tariff Rule for Substitute Highway Service

The Interstate Commerce Commission has issued an order permitting tariff publishing agents of the railroads to put into effect on not less than five days' notice a rule providing for the substitution of station-to-station highway service for I.C.C. rail services. The rule is as follows:

"Wherever as to less-than-carload freight an originating or delivering railroad, party to this tariff, substitutes, at its option, highway vehicle service for service by railroad between stations on its line named in this tariff, the rates and charges as published in this tariff or as amended will apply when the substituted service performed is either entirely by highway vehicle or partly by highway vehicle and partly by railroad."

Under the order all railroads, steamship lines or agents publishing rates applicable to I.C.C. transportation of freight subject to part I of the interstate commerce act are permitted to publish and file with the commission consecutively-numbered supplements, blanket or otherwise, to their respective tariffs applicable to such transportation, containing the above-quoted rule. Each publication, however, must contain a provision that such rule expires not later than June 1, 1936, such supplements to be made effective upon not less than nine days' notice.

### I.C.C. Notices on Motor Carrier Tariffs

The Interstate Commerce Commission last week issued two notices in connection with motor carrier tariffs—one to clarify the tariff-filing obligations of carriers operating wholly within a state but handling interstate traffic, and the other referring to the agency method of publishing tariffs.

In connection with the former it had come to the attention of the commission that motor truck lines operating entirely within a single state are of the view that they are not required to file tariffs. The notice points out, however, that if such carriers "are engaging in interstate or foreign commerce" they must file.

"For example," it says, "if, at a transfer point, they receive from or deliver to another motor carrier, through shipments originating in or destined to points in another State, they are engaging in interstate commerce and they must file tariffs containing the rates and charges which would apply on such shipments from or to the transfer point."

Attention is also called to the fact that under the commission's order of February 21 all motor carrier tariffs must be published and filed on or before March 23 to become effective April 1.

In connection with the agency method of publishing tariffs, the commission stated that it has observed this development "with interest," adding that "no doubt in many instances this method will be found to be desirable." It continues to point out, however, that "it should be understood that

membership in such an association is not required by the commission. Each carrier may initiate and file its own rates with the commission without having to join such organizations.

"It should also be understood that under the motor carrier act, 1935, whenever a carrier joins an association or bureau such carrier is still at liberty to establish joint through rates with non-members, and that because of such membership the carrier does not forfeit the privilege of participating in joint tariffs with non-member carriers which desire to file their own tariffs. Membership in an association or bureau does not give the member carrier the right to refuse to accept shipments tendered, at proper transfer point, by a carrier not a member of its association. When an originating carrier issues a bill of lading to a point on a connecting carrier, the shipper is entitled to receive the through service via any proper transfer point over the lines of any two or more motor carriers provided the proper charges are made for the services of each carrier as set forth in its tariff on file with the commission."

### Statistics of Grade Crossing Accidents

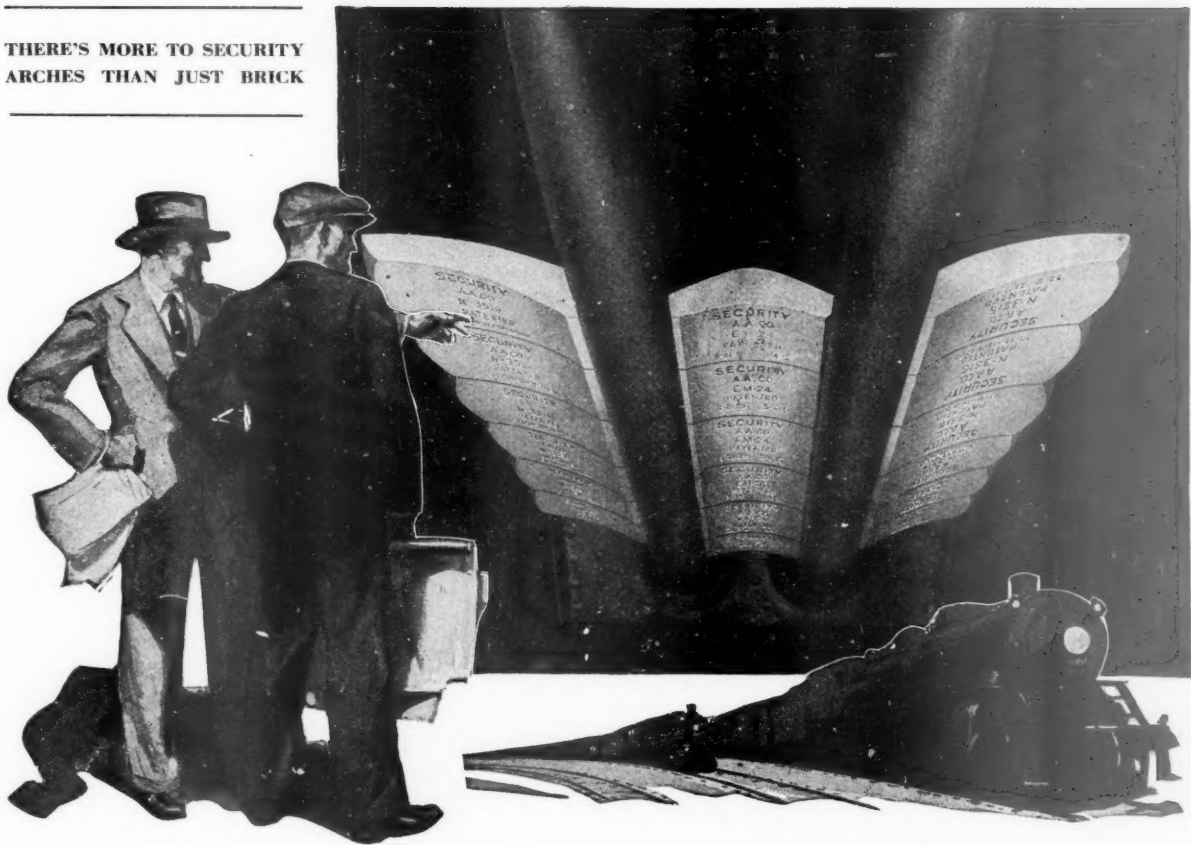
Burt T. Anderson, director of the Bureau of Railway Signaling Economics, 347 Madison avenue, New York City, has issued a 17-page mimeographed pamphlet, containing a great mass of statistics prepared by him in a survey of accidents at railroad highway grade crossings, giving all available data on this subject which can be found in the government records and other places, and also, for three states—Pennsylvania, California and Iowa—additional data which are recorded by those states in fuller detail. Starting with a statement of all fatalities in automobile accidents in the United States (about 36,000 in the year 1934), and showing that only about 3½ per cent of these occurred at crossings with railroads, the pamphlet makes a variety of instructive comparisons. Grade crossing fatalities in the United States in 1934 totaled 26 per cent less than in 1925, though the number of automobiles on the highways was about 25 per cent larger. Statistics are given also for Canada. Of 2,862 accidents in one year, 1,851 were cases where a motor vehicle was struck by a train, while 1,011 were where the motor vehicle ran into the side of a train.

The survey confirms the conclusions of governmental authorities and railroad engineers that the large number of automatic color-light signals, installed at crossings during the past few years, have materially reduced the hazards at crossings.

### Washington Use Tax Case Argued

Arguments in the case of the Northern Pacific versus the state of Washington to determine the validity of the compensating or use tax of two per cent upon goods purchased by the railroad in other states and used in the state were heard by a three-judge federal court at Spokane, Wash., on March 14. At the close, Bert Haney, judge of the United States circuit court of appeals, presiding at this *en banc* hearing, stated that a Wyoming case,

THERE'S MORE TO SECURITY  
ARCHES THAN JUST BRICK



## AN ARCH *Is No Better Than The Brick*

**PICKED** for their fine raw material supplies, their quality reputation and their convenient locations, the following plants supply the Arch brick furnished the railroads exclusively by American Arch Company:

**HARBISON-WALKER  
REFRACTORIES CO.**  
Pennsylvania Ohio Kentucky  
Alabama Missouri

**NORTH AMERICAN  
REFRACTORIES CO.**  
Pennsylvania Kentucky  
**IRONTON FIRE BRICK CO.**  
Ohio

**DENVER SEWER PIPE  
& CLAY CO.**  
Colorado

**ATHENS BRICK & TILE CO.**  
Texas

**GLADDING-McBEAN & CO.**  
California Washington

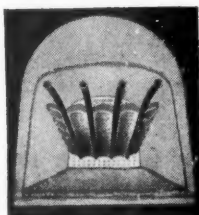
**DIAMOND FIRE BRICK CO.**  
Colorado

**LOUISVILLE FIRE BRICK  
WORKS**  
Kentucky

**DOMINION FIRE BRICK &  
CLAY PRODUCTS, LTD.**  
Saskatchewan, Canada

**CANADA FIRE BRICK  
CO., LTD.**  
Ontario, Canada  
Quebec, Canada

**HARBISON-WALKER  
REFRACTORIES CO.**  
*Refractory Specialists*



**AMERICAN ARCH CO.  
INCORPORATED**  
*Locomotive Combustion  
Specialists* \* \* \*

Edelman versus Boeing Air Transport Company, will exert an influence in the Washington case and gave counsel permission to submit additional briefs bearing on the Edelman case. Counsel for the state will submit a brief within five days and counsel for the railroad will reply in five days.

In the Washington case, the Northern Pacific contends the imposition on the railroad of a tax upon the privilege of using supplies and repair materials shipped in from other states is a burden upon interstate commerce and, therefore, unconstitutional. In the Wyoming case, where State Treasurer Edelman sought to collect a tax from the Boeing Air Transport Company for the privilege of withdrawing from storage gasoline for use in interstate commerce, the United States supreme court held the tax was valid. Counsel for Washington contends that the Washington compensation tax is the same as the Wyoming tax.

### **Santa Fe Bus Affiliate Seeks to Expand System**

The Santa Fe Trail Stages has applied to the Interstate Commerce Commission for authority under the motor carrier act to acquire, by purchase of stock, control of the Central Arizona Transportation Lines and the Arizona-Utah Stages. The granting of the application would bring the two companies, for which the applicant proposes to pay \$75,000, into the Atchison, Topeka & Santa Fe's highway system, since, the application shows, the Santa Fe Trail Stages is controlled by the Southern Kansas Stage Lines, which in turn is owned by the General Improvement Company, a Santa Fe affiliate.

Central Arizona, it is pointed out, has a north-and-south line between Salt Lake City, Utah, and Phoenix, Ariz., which "will constitute a valuable feeder for Santa Fe Trail Stages" and "furnish an optional route between California and all territory East, via Phoenix." Also, it is contended, there will be no undue restraining of competition, for the proposed set-up "will create a competition not heretofore existing, and will enable the Atchison, Topeka & Santa Fe to use the service of Central Arizona Transport Lines to advantage in its operations." The entire Santa Fe Trail system, the application continues, lies almost entirely in territory contiguous to the Atchison, Topeka & Santa Fe where there are "numerous opportunities" for co-ordination, and the acquisition of Central Arizona would further this general co-ordination.

### **S. P. Recalls 101 Trainmen and Enginemen for New Trains**

The numerous improvements in passenger service on the Southern Pacific's Coast, San Joaquin, Shasta and Overland routes, made possible by a pronounced pick-up in passenger traffic beginning early in 1935, have resulted in the recall of 101 trainmen and enginemen to operate the several hundred thousand train miles which these new trains add to the company's annual operations. As reported in the *Railway Age* of February 22, these improvements include the placing of the Daylight Limited,

between Los Angeles, Cal., and San Francisco, on a schedule of 11 hr. for the 471 miles, a reduction of 1 hr. 45 min. in running time; the establishment of a new coast line train between these cities and the inauguration of a new San Francisco-Fresno train.

The establishment of the 11-hr. schedule for the Daylight, which involved the inauguration of a new train and other adjustments on the Coast division, will add 342,151 train-miles to annual operations. The inauguration of the new Fresno-San Francisco service, along with a separate operation of the Owl and West Coast between Los Angeles and Fresno, Cal., and the establishment of gas-electric car service between Porterville, Cal., and Armona, will add 411,392 train-miles to annual operations. Similarly, 306,490 train-miles will be added to the Shasta route operations. This is brought about by a separate operation of the Cascade and Shasta from San Francisco to Dunsmuir, Cal., a separate operation of trains No. 16 and No. 330 from Eugene, Ore., to Portland, and a separate operation of the Klamath and Shasta from Portland to Eugene and Dunsmuir to San Francisco.

### **Experimental Devices Not Within Boiler Inspection Act**

In an action against the Southern Railway for the death of the driver of the engine of a fast train in a derailment, the Supreme Court of the United States holds that where a mechanism known as Wright's Little Watchman, designed to stop trains or derailment, is attached to a locomotive it does not become a part or appurtenance thereof which the carrier is absolutely bound properly to maintain, under the Boiler Inspection Act, the evidence showing that the mechanism is in the experimental state. The court said: "With reason, it cannot be said that Congress intended that every gadget placed upon a locomotive by a carrier, for experimental purposes, should become part thereof within the rule of absolute liability. So to hold would hinder commendable efforts to better conditions and tend to defeat the evident purpose—avoidance of unnecessary peril to life or limb.

"Whatever in fact is an integral or essential part of a completed locomotive, and all parts or attachments definitely prescribed by lawful order of the Interstate Commerce Commission, are within the statute. But mere experimental devices which do not increase the peril, but may prove helpful in an emergency, are not. These have not been excluded from the usual rules relative to liability. Judgment for plaintiff was reversed.—Southern v. Mrs. Olivia Cox Lunsford, Admx. Decided March 2, 1936. Opinion by Mr. Justice McReynolds.

### **Reparation Order Held Invalid**

The Supreme Court of the United States, in a suit against the Pennsylvania Railroad to recover reparation awarded by the Illinois Commerce Commission on the ground that the Panhandle Railroad, since leased to the Pennsylvania, collected unreasonable and discriminatory charges for intrastate transportation of brick from Bernice, Ill., to places within the Chicago switching

district, has reversed a judgment of an Illinois Circuit Court awarding judgment against the Pennsylvania for \$44,428.09.

The court held that the order of the Illinois Commerce Commission awarding reparation on such transportation between October 28, 1920, and February 16, 1922, was invalid so far as regards the period between February 19, 1921, and February 16, 1922. During that period the intrastate rates in force for transportation of brick by the Pennsylvania from Bernice into the switching district were maintained by the railroad pursuant to the Interstate Commerce Commission's order of January 11, 1921. So far as there was conflict between state and federal regulation, the latter prevailed. The state commission, it was held, was not, at any time after the intrastate rates were established under Federal authority, authorized to condemn them or to award reparation in respect of transportation to which they applied.

The state commission's order was held valid so far as it related to transportation between October 28, 1920, and February 19, 1921. The state commission's jurisdiction as to rates for this service was untrammelled by any order of the Interstate Commerce Commission or other exertion of federal power; and no question as to whether the reparation order, in this respect, was repugnant to the due process clause of the Fourteenth Amendment to, or the commerce clause of, the Federal Constitution, was, by answer, motion or otherwise, expressly raised in the trial court.—*Pennsylvania v. Illinois Brick Co.*, Decided March 2, 1936. Opinion by Mr. Justice Butler.

### **I. C. C. Rules for Locomotives Other Than Steam**

The Bureau of Locomotive Inspection has sent out a circular covering modifications in the Rules and Instructions for the Inspection and Testing of Locomotives Propelled by Other than Steam Power, which will become effective May 1, 1936. A revised edition of the Rules is being issued and will be available in about 60 days. These revisions cover changes required to include hot water heating boilers as well as steam heating boilers, to provide for gages and vents on fuel tanks, and also a few other provisions to provide more adequately for certain requirements.

**Rule 205 (b)**—Range in starting and stopping for air-compressor governors has been changed from 2 lb. to 5 lb.

**Rule 223 (a)**—An additional clause relative to center plates for motor trucks provides that they shall be securely fastened and maintained.

**Rule 229 (c)**—Specifications covering width of hinged cab windows has been omitted.

**Rule 252**—Provisions now specify that voltmeters and ammeters on units receiving power from outside sources shall be tested every six months, and on units driven from power generated within the unit every 12 months.

**Rule 256 (a) and 323 (c)**—Provisions specify that fuel reservoir shall be filled and vented only from outside of cab or compartment and that vent pipes shall not discharge on the roof, nor on or between the rails. Revised rule also specifies that

# THE SUPERHEATER COMPANY

NEW YORK



CHICAGO

## ELESCO FEED WATER HEATER EQUIPMENT

*substantially increases the hauling capacity  
of locomotives*



NEW YORK  
60 East 42nd St.

MONTREAL  
The Superheater Co., Ltd.  
Dominion Square Bldg.

CHICAGO  
Peoples Gas Bldg.

REPRESENTATIVE OF AMERICAN THROTTLE COMPANY, INC.

fuel reservoir shall be equipped with a gage indicating the level and that such gage shall be located so as to be readily visible to the person filling the reservoir.

**Rule 302 D**—A new clause limits working pressure of cast iron boilers to 15 lb. per sq. in.

**Rules 303 (B), 308, 309, 315, 316, 317 and 320**—These have been amplified to include hot water boilers as well as steam boilers, and include specifications for water relief valves on hot water boilers. These rules cover testing, washing, etc.

### Hearings on Proposed Motor Carrier Insurance Requirements

Considerable opposition to the insurance requirements for motor carriers, proposed by the Interstate Commerce Commission's Motor Carrier Bureau, developed at hearings held before Division 5 of the commission in Washington, D. C., last week and on March 16. In closing the hearing on the latter date Commissioner Eastman stated that the record would remain open for the taking of additional testimony if deemed necessary.

The opposition of bus and truck organizations and operators was supplemented by that of insurance companies and state insurance executives. Virtually all features of the proposed requirements were under attack, especially those relating to minimum coverage, the acceptability of insurance companies and the eligibility rules for a self-insurer.

Under the proposed requirements buses would be required to provide insurance of \$10,000 up (depending on seating capacity) for injury to passengers and \$5,000 property damage. Trucks would be required to carry from \$10,000 to \$25,000 for public liability and \$5,000 for property damage; common carrier trucks would in addition be required to carry insurance for the full value of the freight hauled. Also, it was contended, the proposed requirements for the acceptability of insurance companies restrict the list of those eligible to companies licensed in every state in which a carrier does business; and the minimum surplus or net worth of \$200,000 required for self-insurance practically prohibits such coverage.

### C.N.R. Union Men to Erect Memorials to Sir Henry Thornton

Bronze memorial plaques honoring the memory of the late Sir Henry W. Thornton, K.B.E., former chairman and president of the Canadian National, are to be placed at eleven locations across the Dominion of Canada under a plan arranged by a committee composed of grand lodge officers and general chairmen of labor organizations on that system. The unveiling of these plaques will take place simultaneously on a date to be announced by the committee following completion of the necessary details. The plan is outlined in a letter from W. G. Atkinson, general secretary and treasurer, 91 John street, Moncton, N. B., addressed to all employees of the railways, and published in the C.N.R. magazine.

Mr. Atkinson's letter sets forth that the general chairmen of the labor organizations have taken this action because Sir

Henry was "known to and beloved by each and every employee, and one whom the employees of the Canadian National Railways were always proud to be associated with. Each employee always found in him a true friend and helper, a staunch supporter and believer in the principles and objects of organized labor, and a staunch and loyal believer in and supporter of our publicly-owned railway."

"His zeal and work, always prompted by the desire to prove to the world that public ownership of the Canadian National Railways could be made a success, hastened, as it does to any individual who puts service and loyalty ahead of self, his early departure to the Great Beyond."

### Kansas City Board of Trade Opposed to Government Ownership

Government ownership or control of American railroad lines was condemned in a resolution endorsed by the Kansas City (Mo.) board of trade on January 29. Waste, inefficiency and the growing burden of bureaucracy were cited as probable results of such control. The resolution contended that the competitive system of private ownership of transportation facilities is greatly to be desired by all business men, and the destruction of competition under any plan of direct government control will result in great injury to shipping interests.

The members of the board of trade of Kansas City, says the resolution, are large users of transportation. The railroads of the United States have been built into an efficient transportation machine, providing prompt and adequate service to shippers throughout the country, and this development has proceeded under private ownership. The control of the railroads by the government during the war demonstrates the utter undesirability of changing the present system of private ownership to one of government control in any direct way whatsoever. Experience of all government-operated institutions is a record of waste and inefficiency and there is no reason to believe that government ownership of railroads would be otherwise. It would be certain to increase the taxes to be paid by the public and would raise grave problems of revenue for local governing units. The bureaucracy which would result would be an added burden upon the public and a constant invitation to political interference.

### Labor-Management Conferences

Conferences between the railway labor and management committees created to negotiate an agreement for the protection of employees displaced by consolidation projects continued in Washington, D. C., this week. While no definite information was made public it was understood when this issue went to press that the negotiations had not yet reached the impasse which would prompt the conferees to seek definite arrangements for a meeting with President Roosevelt in accordance with the suggestion of his March 6 letter to J. A. Phillips, acting chairman of the Railway Labor Executives Association, and J. J. Pelley, president of the Association of American Railroads.

Meanwhile Mr. Phillips and Mr. Pelley

sent to the President separate replies. The former, whose letter, dated March 16, was made public on March 17, said:

The Railway Labor Executives Association, in session here today, have authorized this acknowledgment of your letter of March 6, 1936, addressed jointly to Mr. J. J. Pelley, president, Association of American Railroads and the undersigned, referring to the consolidations of railroads. Negotiations have been in progress for some time between the Railway Labor Executives Association and a committee representing the carriers in an effort to reach an agreement for the protection of the rights and interests of the employees.

Coming, as it did, in the midst of our negotiations, your letter was received with some surprise. It covers a number of points, which, because of the status of negotiations, we feel a hesitancy to answer at this time.

The good faith of the railway employees in connection with the present negotiations is evidenced by the fact that such negotiations were initiated by the Railway Labor Executives Association. These initial steps were taken early in December, 1935. We believe that already a reasonable length of time has been devoted to the task and that we cannot be expected to continue negotiations to the point of jeopardizing the rights and interests of those we represent. However, we are meeting the carriers' committee again today and, should negotiations fail, we will, in compliance with your request, arrange to confer with you.

Mr. Pelley's reply, also dated March 16, was made public on March 18. It was as follows:

On behalf of railroad management I beg to acknowledge receipt of your letter of March 6th, addressed jointly to Mr. J. A. Phillips and myself, concerning the general railroad situation, and referring specifically to the question of protection of employees where two or more railroads make economies by the consolidation, co-ordination or joint use of railroad facilities.

You may be assured that railroad management is in accord with your suggestion that every possible economy should be effected. However, no worth-while economies can be made by co-ordination without taking men out of service. In action of this kind railroad management desires to avoid undue hardship to the employees and fully concurs in the view which you express, that the question is one which should be handled and concluded by agreement rather than by legislation.

As a matter of information, the question of employee protection in possible consolidation and co-ordination projects has been the subject of joint consideration and conference for the past several weeks by committees representing management and employees. Speaking for and on behalf of management, I desire to assure you that every effort will be made to reach a fair and amicable adjustment of the question. Should it develop that we are unable to agree, then we will be glad to take advantage of your suggestion for a joint conference with you.

### Payroll Tax Regulations

Regulations under which the railroads and their employees will be required to pay the payroll tax enacted as a companion measure to the railroad retirement act were issued on March 17 by the Bureau of Internal Revenue.

The regulations deal with the three separate taxes imposed under the act upon carriers, their employees, and employees' representatives. The taxes apply only to wages paid and received during the period March 2, 1936, to February 28, 1937, for services of employees and of employees' representatives. The act and the regulations define taxable remuneration and the classes of taxpayers in detail.

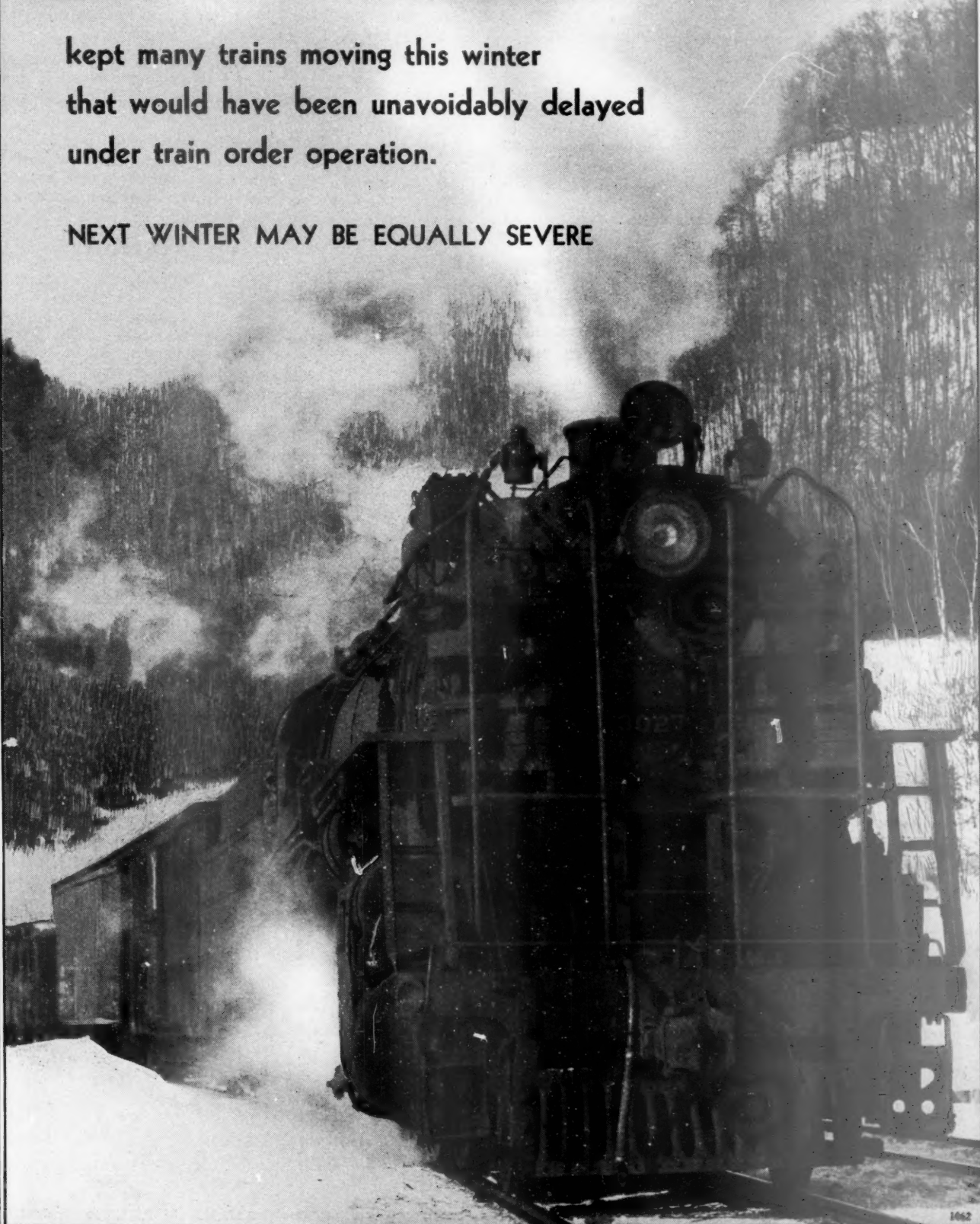
In general, any remuneration for services as an employee of a carrier is taxable under the act, whether received in money or in other remuneration. If, for example, an employee receives \$150 in money and a grocery order for \$50, his taxable compensation would be \$200. Excluded, however, is any sum in excess of \$300 paid by a carrier to an employee for services performed in any calendar month. Thus, if an employee receives \$500 from a carrier for services performed in one

*Continued on next left-hand page*

# "UNION" CENTRALIZED TRAFFIC CONTROL

kept many trains moving this winter  
that would have been unavoidably delayed  
under train order operation.

NEXT WINTER MAY BE EQUALLY SEVERE



1881

**Union Switch & Signal Co.**

1936

SWISSVALE, PA.

NEW YORK

MONTREAL

CHICAGO

ST. LOUIS

SAN FRANCISCO

calendar month, only \$300 of such sum is taxable. Also excluded are tips and the value of free transportation. Pension payments, workmen's compensation payments, and any payments of like character received on account of sickness, disability, or other form of personal relief are not taxable.

The tax on each employee is measured by the wages he receives, and each carrier is taxed on the sum of the wages it pays to its employees. The rate of each of these taxes is  $3\frac{1}{2}$  per cent of the wages.

The act provides that each carrier shall withhold the tax on employees at the time the carrier makes wage payments. Amounts so withheld, together with the tax on the carrier, must be paid by the carrier to the collector of internal revenue for the district in which the carrier's principal place of business is located. Returns are required to be filed quarterly, and returns of carriers and of employees' representatives for the first quarter, which ends May 31, 1936, will be due June 30, 1936. The taxes shown to be due on a return must be paid at the time the return is filed. The necessary forms upon which to make returns will be made available at a later date at the offices of collectors of internal revenue. Under the law employees are not required to file returns.

Carriers and employees' representatives are required to keep such records as will enable the commissioner of internal revenue

to ascertain whether the taxes are correctly computed and paid. No particular form is prescribed for these records, but the regulations set out certain items of information which the records must show. While not mandatory, employees are advised to keep permanent accurate records showing the name of each carrier for which he performs service as an employee, the duration of employment by each, the amount of each remuneration payment (including employees' tax) and the date of its receipt, and the amount of employees' tax deducted from each such payment.

## Equipment and Supplies

### FREIGHT CARS

THE SEABOARD AIR LINE is inquiring for 125 phosphate cars of 70 tons capacity.

THE DELAWARE & HUDSON will build 50 composite hopper cars of 50 tons' capacity in its shops at Oneonta, N. Y., and during the year will rebuild 100 coal cars.

THE ERIE is now inquiring for 500 box cars and 300 automobile cars, all of 50 tons' capacity; 100 of the automobile cars are to be equipped with loaders. This

company was reported in the *Railway Age* of February 1, page 232, as having asked for authority to issue \$2,200,000 of equipment trust certificates to be delivered to the P.W.A. for a loan to finance the purchase of this equipment.

THE WEYERHAEUSER TIMBER COMPANY has ordered 75 logging cars of 50 tons' capacity from the Pacific Car & Foundry Company.

CHARLES LENNIG & Co., Inc., Philadelphia, Pa., has ordered one tank car of 50 tons' capacity and one of 30 tons' capacity, from the General American Transportation Corporation.

### LOCOMOTIVES

THE GREAT LAKES STEEL CORPORATION, Detroit, Mich., has ordered one 73-ton, 6-wheel fireless steam locomotive from the H. K. Porter Company. The driving axles of this locomotive will be equipped with Timken roller bearings.

### IRON AND STEEL

THE KANSAS, OKLAHOMA & GULF has ordered 5,700 tons of rails from the Carnegie-Illinois Steel Corporation.

THE NEW YORK CENTRAL is inquiring for 1,800 tons of steel to be used on its West Side improvements between Ninety-fourth and Ninety-eighth streets, New York City.

## Operating Revenues and Operating Expenses of Class I Steam Railways in the United States

Compiled From 140 Monthly Reports of Revenues and Expenses Representing 144 Class I Steam Railways  
FOR THE MONTH OF JANUARY, 1936 AND 1935

Item	United States		Eastern District		Southern District		Western District	
	1936	1935	1936	1935	1936	1935	1936	1935
Average number of miles operated .....	237,076	238,424	58,637	59,024	44,954	45,268	133,485	134,132
Revenues:								
Freight .....	\$241,159,708	\$211,451,904	\$105,934,973	\$95,569,498	\$49,527,492	\$42,426,251	\$85,697,243	\$73,456,155
Passenger .....	a 34,101,961	b 34,453,986	19,685,970	18,191,914	5,035,766	4,407,945	9,380,225	7,854,127
Mail .....	7,707,229	7,597,172	2,951,606	2,898,746	1,399,280	1,378,317	3,356,343	3,320,109
Express .....	3,014,780	2,835,485	1,041,197	1,015,445	760,416	770,144	1,213,167	1,049,896
All other transportation ..	6,552,787	5,860,992	3,508,693	3,177,697	669,394	575,073	2,374,700	2,108,222
Incidental .....	5,843,687	5,358,879	3,248,929	2,964,013	911,743	869,027	1,683,015	1,525,839
Joint facility—Cr. ....	947,874	820,493	294,165	271,006	196,553	156,436	457,156	393,051
Joint facility—Dr. ....	229,349	182,146	49,405	50,087	19,788	17,138	160,156	114,921
Railway operating revenues .....	299,098,677	264,196,765	136,616,128	124,038,232	58,480,856	50,566,055	104,001,693	89,592,478
Expenses:								
Maintenance of way and structures .....	30,423,206	27,695,615	12,642,095	11,687,084	6,334,909	5,870,644	11,446,202	10,137,887
Maintenance of equipment ..	61,833,071	55,228,363	28,391,059	24,748,788	11,299,996	10,666,213	22,142,016	19,813,362
Traffic .....	8,016,938	7,616,800	2,948,920	2,809,440	1,668,015	1,595,494	3,400,003	3,211,866
Transportation .....	115,593,652	104,590,316	53,584,830	49,056,916	19,596,946	17,538,511	42,411,876	37,994,889
Miscellaneous operations ..	2,922,046	2,567,790	1,411,315	1,262,052	412,021	356,687	1,098,710	949,051
General .....	13,179,114	14,865,109	5,763,636	5,931,874	2,243,875	2,429,924	5,171,603	6,503,311
Transportation for investment—Cr. ....	189,381	161,520	27,141	32,513	24,094	27,139	138,146	101,868
Railway operating expenses .....	231,778,646	212,402,473	104,714,714	95,463,641	41,531,668	38,430,334	85,532,264	78,508,498
Net revenue from railway operations .....	67,320,031	51,794,292	31,901,414	28,574,591	16,949,188	12,135,721	18,469,429	11,083,980
Railway tax accruals .....	21,529,301	19,857,108	8,751,490	7,910,737	4,753,212	4,238,901	8,024,599	7,707,470
Railway operating income ..	45,790,730	31,937,184	23,149,924	20,663,854	12,195,976	7,896,820	10,444,830	3,376,510
Equipment rents—Dr. balance ..	6,937,713	7,022,804	3,500,694	3,505,979	310,620	283,872	3,126,399	3,232,953
Joint facility rent—Dr. balance ..	3,088,269	2,979,736	1,781,094	1,726,094	311,284	306,079	995,891	947,563
Net railway operating income .....	c 35,764,748	e 21,934,644	17,868,136	15,431,781	11,574,072	7,306,869	6,322,540	d 804,006
Ratio of expense to revenues (per cent) .....	77.49	80.40	76.65	76.96	71.02	76.00	82.24	87.63
Depreciation included in operating expenses .....	16,123,753	16,352,833	7,009,269	7,062,079	3,200,734	3,253,022	5,913,750	6,037,732
Total maintenance before depreciation .....	76,132,524	66,571,145	34,023,885	29,373,793	14,434,171	13,283,835	27,674,468	23,913,517
Net railway operating income before depreciation ...	51,888,501	38,287,477	24,877,405	22,493,860	14,774,806	10,559,891	12,236,290	5,233,726

a Includes \$974,920 sleeping and parlor car surcharge.

b Includes \$925,683 sleeping and parlor car surcharge.

c Includes charges to Railway Tax Accruals in the amount of \$1,403,627 on account of accruals for excise taxes levied under the Social Security Act of 1935.

d Deficit or other reverse items.

e Includes charges to General Expenses in the amount of \$2,186,994 on account of accruals for liability under the Railroad Retirement Act of 1934.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

## Supply Trade

The R and C Company, C. D. Hicks and W. E. Hicks, 1218 Olive street, St. Louis, Mo., have been appointed southwest representatives for the Wilson Engineering Corporation, Chicago.

W. F. Hebard & Co., sales agent for the International Harvester Company's line of industrial tractors and other power-driven material-handling equipment in the Chicago terminal area, has moved its sales room from 551 West Van Buren street to 433 South Jefferson street, Chicago.

Franklin C. Vandervort, Jr., has again become associated with Johns-Manville Sales Corporation, with headquarters at Chicago. Mr. Vandervort was formerly associated with the Transportation department, and is now re-entering the Johns-Manville service as representative in the western region of its sales organization.

Daniel B. Worth has joined the locomotive department of the Cummins Engine Company, Columbus, Ind., and his duties will be directly connected with that department. Mr. Worth was formerly associated with the Baldwin Locomotive Works and he has a wide experience with many types of internal-combustion engines as applied to railroad use, his previous work having been in designing, building and servicing such equipment.

John F. Cuneo, president of the Cuneo Press, has been elected chairman of the board of Crerar, Adams & Co., Chicago; Edward C. Poehler, vice-president of Crerar, has been elected president, to succeed Russell Wallace, deceased; John H. Stewart, manager of the railroad printing department of the Cuneo Press, has been elected vice-president of Crerar, Adams & Co.; George J. Doyle, sales manager of Crerar, has been



(c) Moffett Studio

Edward C. Poehler

elected vice-president; Raymond P. Fischer, a director, has been appointed secretary; and E. E. Kastner, cashier, has been promoted to treasurer. Mr. Poehler was born in Chicago on September 23, 1885, and entered the employ of

Crerar, Adams & Co. on May 25, 1902, as a clerk in the shipping department. He was promoted to purchasing agent in January, 1916, and, in 1922, was elected vice-president, which position he has held until his recent election.

### Fairbanks, Morse & Co.

The annual report of Fairbanks, Morse & Company shows a net profit of \$1,465,779 for 1935, as compared with \$563,846 for 1934. Total current and working assets amounted to \$14,479,223, while total current liabilities were \$2,143,008.

During the year, the company dissolved a number of its subsidiaries and is now operating them as separate divisions of the parent company, rather than as subsidiaries. The principal subsidiaries dissolved were the G. W. Price Pump & Engine Company, now operating as the Price Pump Division, and Fairbanks-Morse Home Appliances, Inc., now operating as the Home Appliance Division.

A summary of the consolidated income and earned-surplus accounts for the year ended December 31, 1935, follows:

	1935	1934
Net Sales .....	\$18,221,228	\$12,551,466
Cost of sales, selling, administrative and general expenses .....	16,150,437	11,205,274
Net profit from operations before depreciation, interest on debentures, and Federal income tax...	\$2,070,791	\$1,346,192
Miscellaneous Income:		
Interest received .....	171,780	
Other income including earnings of non-manufacturing subsidiaries before depreciation and Federal income tax .....	221,625	
Net profit before depreciation, interest on debentures, and Federal income tax.	\$2,464,196	
Deduct:		
Provision for depreciation .....	\$628,030	536,419
Interest on debentures .....	273,434	290,269
Federal income tax...	230,011	80,197
Net profit (excluding Municipal Acceptance Corporation) .....	\$1,332,721	\$439,846
Net Income of Municipal Acceptance Corporation .....	133,058	124,539
Consolidated net profit .....	\$1,465,779	\$563,846
<b>EARNED-SURPLUS ACCOUNT</b>		
Balance, December 31, 1934 (unappropriated) .....	\$3,926,851	\$3,293,400
Add:		
Consolidated net profit for year 1935, as above .....	\$1,465,779	563,846
Discount on debentures purchased for sinking fund .....		69,605
Surplus previously appropriated for redemption of 7% preferred stock .....	662,600	
	\$6,055,230	
Deduct:		
Dividends paid on 7% preferred stock ....	\$229,792	
Cash paid to 7% preferred stockholders as part of reclassification of stock.....	131,315	
Premium on debentures purchased for sinking fund .....	833	
Balance December 31, 1935 .....	\$5,693,290	\$3,926,851

## Construction

CENTRAL OF NEW JERSEY.—This company has been ordered by the New Jersey Board of Public Utility Commissioners to begin work by May 1 on the elimination of the grade crossing of this road at Asbury avenue in the township of Atlantic, N. J. An overhead structure will be built to carry the highway over the tracks of the railroad. The cost of the work as estimated by the railroad is \$81,573.

CHICAGO GREAT WESTERN.—A contract has been awarded to the Roberts and Schaefer Company, Chicago, for the construction of two N. & W. type cinder-handling plants at Oelwein, Iowa.

GEORGIA & FLORIDA.—Receivers for this road have applied to the Interstate Commerce Commission for authority to construct a 1.65-mi. extension of its line from Kingwood, Ga., to Moultrie. The estimated cost, including a station to be constructed in Moultrie, is \$45,000.

MISSOURI PACIFIC.—This company plans to undertake the construction of 3.71 miles of track between Spadra Junction, Ark., and Knoxville Junction, to replace a line that was washed out by the Arkansas river in June, 1935. By moving the line back a maximum of 4,000 ft. from the river to the face of the river bluffs, it is felt that it will be safe from further flood damage. This project will cost approximately \$260,000, will require about six months to complete and will provide employment for about 150 men.

NORFOLK SOUTHERN.—The Interstate Commerce Commission has dismissed, for want of prosecution, a joint application of the receivers of this company and the Durham & South Carolina R. R. for authority to construct a line in Durham county, N. C.

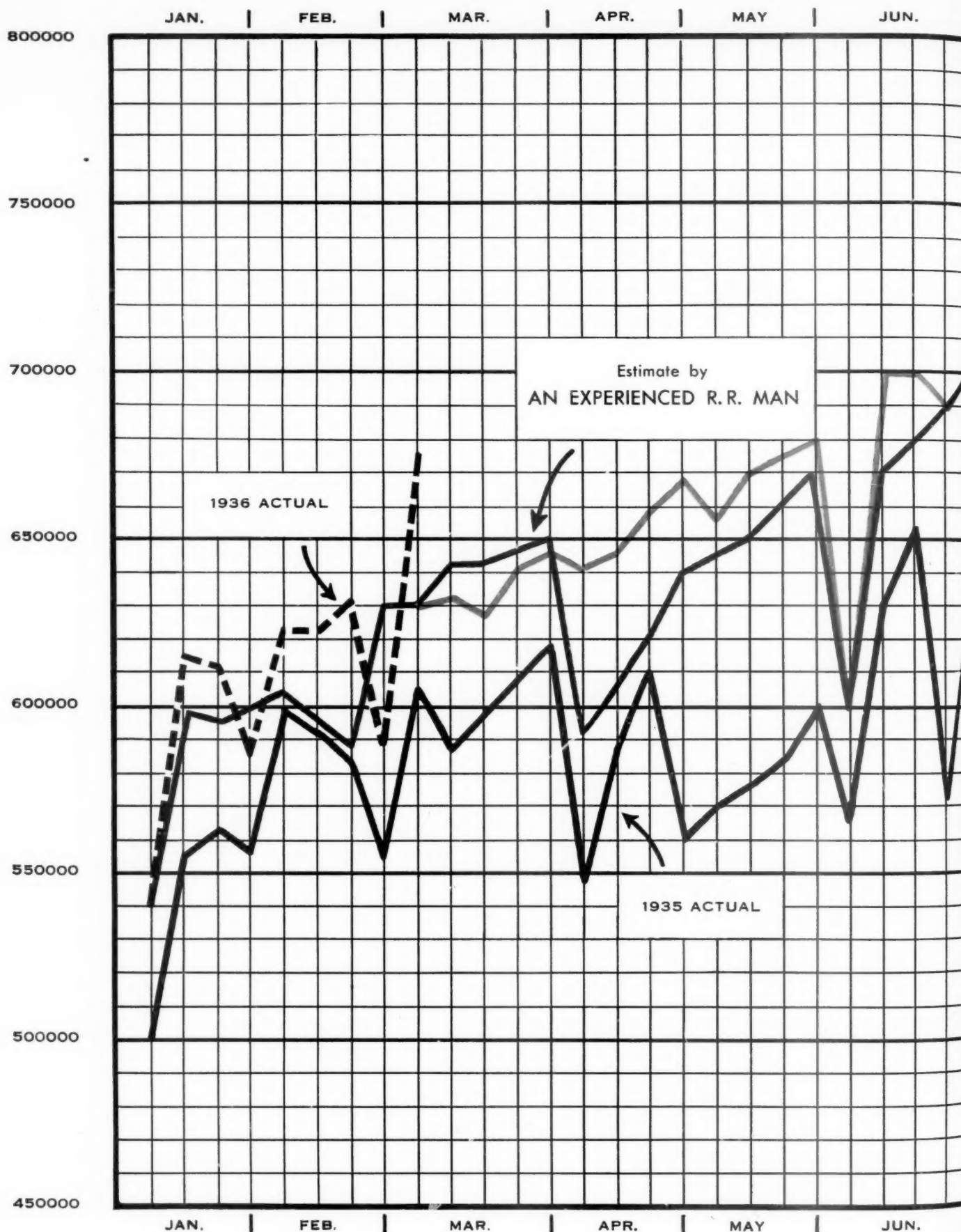
OREGON, PACIFIC & EASTERN.—The Interstate Commerce Commission has authorized this company to construct a branch line from Walden, Oreg., to a proposed mill and town site at Mosby, 3 miles; estimated cost, \$23,352.

PORT ISABEL & RIO GRANDE VALLEY.—This company has applied to the Interstate Commerce Commission for authority to construct a 5.075-mi. extension of its line from Esoes, Texas, to San Roman. Application has been made to the Reconstruction Finance Corporation for a loan for the project.

WABASH.—The United States District court at St. Louis has authorized the receivers of this company to spend \$276,297 for improvements to right of way. While the largest part of this fund will be used to replace 70, 75 and 80-lb. rails with 90-lb. rails at various points, portions of it will also be spent for the strengthening of the embankment between Brunswick, Mo., and North Kansas City, and for the construction of a bridge across the Nishnabotna river near Shenandoah, Iowa.

Continued on second left-hand page

# AMERICAN LOCOMOTIVE



# 30 CHURCH STREET

# MOTIVE COMPANY

JUL. | AUG. | SEPT. | OCT. | NOV. | DEC.

Estimate by  
JOHN L. KERR  
An Expert Statistician

800000

750000

700000

650000

600000

550000

500000

450000

WEEKLY FREIGHT CAR LOADINGS  
ACTUAL FOR 1935  
ESTIMATED FOR 1936

JUL. | AUG. | SEPT. | OCT. | NOV. | DEC.

# NEW YORK N.Y.

## Financial

**BOSTON & MAINE.—Abandonment.**—The Interstate Commerce Commission has authorized this road to abandon a 1.5-mi. section of line, extending from the west bank of the Concord river in Lowell, Mass., to a point near Wamesit station, Tewksbury.

**CANADIAN PACIFIC.—Abandonment.**—The Interstate Commerce Commission has authorized this company and the Midland R.R. to abandon (the latter company as to interstate and foreign commerce only) the entire line of the latter company from Elkhurst, Vt., to the Canadian boundary, 1 mile.

**CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Release of Collateral.**—This road has applied to the Interstate Commerce Commission for authority to obtain the release from collateral pledged for R.F.C. loans of securities representing \$562,500 of advances to the Chicago Union Station Company. Under the Station Company's current refinancing proposal, each of the four proprietary carriers will cancel that amount of advances made by them.

**CHICAGO UNION STATION.—Securities.**—This company has applied to the Interstate Commerce Commission for authority to issue \$44,000,000 of first mortgage  $3\frac{3}{4}$  per cent bonds, series E, maturing July 1, 1963, the proceeds to be used for the redemption on July 1 at 105 and accrued interest of \$30,850,000 of  $4\frac{1}{2}$  per cent first mortgage gold bonds, series A, and \$13,150,000 of 5 per cent first mortgage gold bonds, series B. The new bonds, which would be guaranteed by the Chicago Union Station Company proprietors—the Chicago, Burlington & Quincy; the Chicago, Milwaukee, St. Paul & Pacific; the Pittsburgh, Cincinnati, Chicago & St. Louis; and the Pennsylvania—would be subject to call on 90 days' notice on July 1, 1941, or on any interest date thereafter up to and including July 1, 1956, at 108; and thence at reducing premiums to the maturity date. Subject to approval of the commission, a contract for the sale of the bonds at 102 $\frac{1}{4}$  has been negotiated with Kuhn, Loeb & Co. In the same application the Station Company seeks authority to issue \$600,000 of guaranteed 3 per cent notes to evidence bank loans. These would be payable in semi-annual installments of \$150,000 and subject to call on 30-days' written notice prior to any semi-annual maturity date. The application states that the annual saving in interest on the bonds will be \$395,000, of which \$300,000 is to be used in the first two years to retire the \$600,000 of bank loans.

**DELAWARE, LACKAWANNA & WESTERN.—Equipment Trust Certificates.**—This road has applied to the Interstate Commerce Commission for authority to purchase at 104 from the Reconstruction Finance Corporation its 4 per cent series A, \$3,619,000, and series B, \$1,033,000, equipment trust certificates which were acquired by the R.F.C. from the Public Works Administration. The D. L. & W. proposes

to sell the certificates through competitive bidding at not less than 105.

**KANSAS, OKLAHOMA & GULF.—Notes.**—This road has been granted authority by the Interstate Commerce Commission to issue at par not exceeding \$285,000 of 4 per cent serial notes, the proceeds to be used for maintenance work.

**LOUISIANA & ARKANSAS.—Equipment Trust Certificates.**—This road has applied to the Interstate Commerce Commission for authority to assume obligation as guarantor with respect to \$900,000 of equipment trust certificates.

**MINNEAPOLIS & ST. LOUIS.—Purchase.**—The Associated Railways Company, formed by eight western railways for the purpose of acquiring this railroad, has applied to the Interstate Commerce Commission for authority to borrow \$7,200,000 from the Reconstruction Finance Corporation to finance the transaction. After the line is purchased, it is the intention of the new company to abandon certain parts of the line and apportion the remainder among the eight participating carriers. Bonds would be given the R. F. C. guaranteed in varying amounts by the participating railroads.

**MISSOURI & KANSAS.—Abandonment.**—This road has applied to the Interstate Commerce Commission for permission to abandon its 24-mi. electric line, extending from Kansas City, Mo., to Olathe, Kan.

**PITTSBURGH & WEST VIRGINIA.—R.F.C. Loan.**—The Interstate Commerce Commission has authorized an extension to May 28 next of the time of payment of a loan of \$500,000 from the Reconstruction Finance Corporation to this company which matures March 22.

**RAILROAD CREDIT CORPORATION.—Petition to intervene in W. P. reorganization.**—This company has applied to the Interstate Commerce Commission for permission to intervene in the reorganization proceedings of the Western Pacific. The petitioner states that there is due it from the W. P. \$2,552,899.72, the unpaid balance of two loans, and that it believes that the plan of reorganization proposed for the debtor is "unjust and inequitable" insofar as it relates to the rights and claims of the R. C. C.

**ST. LOUIS SOUTHWESTERN.—Salaries of Trustee and Counsel.**—Berryman Henwood, trustee of the St. Louis Southwestern, has applied to the Interstate Commerce Commission for a reconsideration of its order of February 28 fixing maximum annual compensation for himself and A. H. Kiskaddon, general counsel, at \$15,000 and \$10,800 respectively. The application points out that Mr. Henwood devotes virtually all of his time to the trusteeship, and asks that a "reasonable" compensation be fixed. It also calls attention to the recommendation in the previous proceeding that Mr. Kiskaddon's salary be fixed at \$12,000.

**VIRGINIA & WESTERN.—Promissory Note.**—This company has applied to the Interstate Commerce Commission for authority to issue an unsecured 6 per cent

promissory note in the amount of \$5,136,144.38 to be delivered to the Virginian as evidence of indebtedness on account of advances made by the latter.

**TEXAS & PACIFIC.—Abandonment.**—The Interstate Commerce Commission has authorized this company to abandon 3,800 ft. of its Pleasant Hill branch in Reisar, La.

**WEATHERFORD, MINERAL WELLS & NORTHWESTERN.—Abandonment.**—The Interstate Commerce Commission, by Division 4, has approved the abandonment by this company of a 12.05-mi. section of its line extending from Salesville, Texas, to Graford.

**WESTERN PACIFIC.—Trustees' Certificates.**—The Interstate Commerce Commission has authorized the trustees of this company to issue not exceeding \$3,000,000 of trustees' certificates to finance maintenance work and the purchase of rolling stock. The certificates will bear interest at 4 per cent and will be sold at not less than par.

### Dividends Declared

Mahoning Coal R. R.—\$6.25, quarterly, payable May 1 to holders of record April 15.  
Southern—Mobile & Ohio—Stock Transfer Certificates, \$2.00, semi-annually, payable April 1 to holders of record March 16.

### Average Prices of Stocks and of Bonds

	Mar. 17	Last week	Last year
Average price of 20 representative railway stocks..	48.51	48.83	28.71
Average price of 20 representative railway bonds..	80.76	81.06	71.35

## Railway Officers

### EXECUTIVE

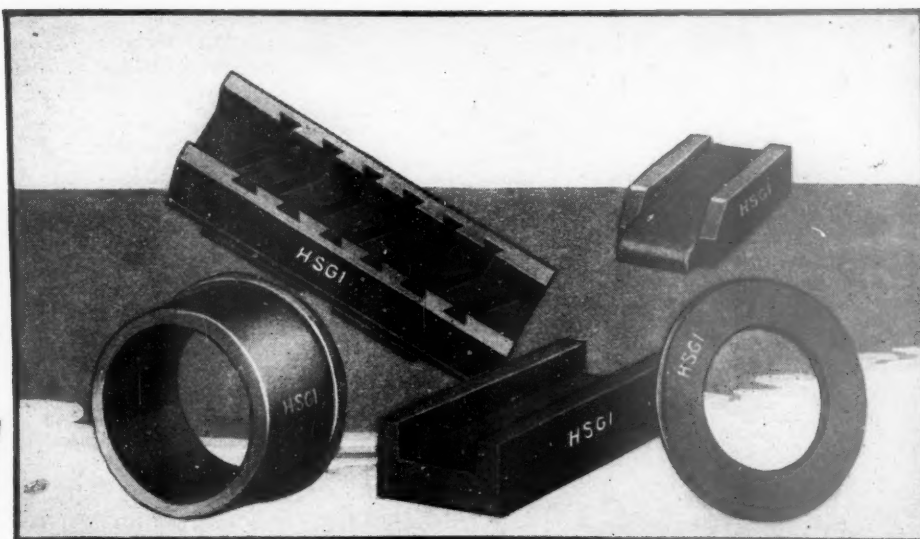
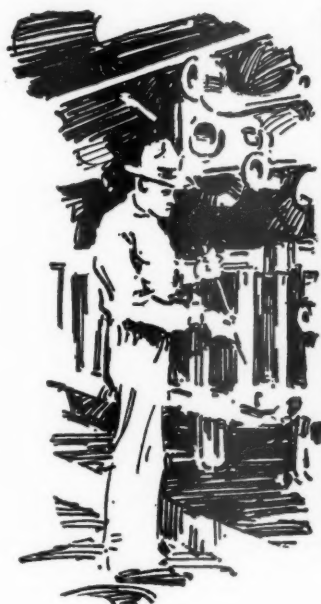
**William K. Tate**, who has been appointed assistant to the vice-president and traffic manager of the Nashville, Chattanooga & St. Louis, with headquarters at



William K. Tate

Nashville, Tenn., as noted in the *Railway Age* of March 7, has been connected with this company for about 19 years. He

Continued on next left-hand page



# The Foundation For Good Performance

**M**ANY items on the daily work reports can be eliminated by the application of HUNT-SPILLER *Air Furnace* GUN IRON Crosshead Shoes, Outer Rod Bushings, Pedestal Shoes and Wedges.

The resistance of these HSGI parts to frictional wear and shock not only insures greater mileage between renewals but also helps to prevent those disastrous pounds which are responsible for many expensive repairs.

Application on your power will result in more dependable performance and big savings in maintenance costs.



## HUNT-SPILLER MFG. CORPORATION

J. G. Platt Pres. & Gen. Mgr. / V. W. Ellet Vice-President

### Office & Works

383 Dorchester Ave.

South Boston, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote, St. Paul Rd., Montreal, P. Q.

Export Agent for Latin America:

International Rwy. Supply Co., 30 Church Street, New York, N. Y.

# HUNT-SPILLER GUN IRON

*Air Furnace*

was born on January 13, 1898, at Tyler, Tex., and received his higher education at Vanderbilt University, Nashville. He entered the service of the N. C. & St. L. on March 13, 1917, as a draftsman in the engineering department, later serving as instrumentman and topographer on a survey party. On January 1, 1918, he was appointed assistant division engineer on the Huntsville division, with headquarters at Tullahoma, Tenn., holding this position until October 1, 1918, when he volunteered for service in the United States Army, serving at the Officers Training Camp at Fort Monroe, Va. On December 1, 1918, Mr. Tate returned to his former position on the N. C. & St. L. at Tullahoma, where he served until March 16, 1929, when he was appointed industrial engineer in the industrial and public relations division of the traffic department, with headquarters at Nashville. On January 1, 1935, he was placed in charge of the industrial and public relations division, with the same title, in which capacity he served until his recent appointment as assistant to the vice-president and traffic manager. During the period from March, 1929, to March, 1936, Mr. Tate's work consisted largely of special duties assigned to him by the vice-president and traffic manager and the general freight agent.

**L. E. Smith**, general manager of the Tennessee Railroad, with headquarters at Oneida, Tenn., has been elected also vice-president.

## OPERATING

**Frank G. Love** has been appointed superintendent of property protection of the New York Central, with headquarters at New York, succeeding **Carl L. Jellinghaus**, promoted.

**E. K. Lucy** has been appointed acting trainmaster on the Colorado division of the Missouri Pacific, with headquarters at Pueblo, Colo., succeeding **R. E. Allen**, who has been transferred to Hoisington, Kan., with jurisdiction over the Council Grove, Salina, Great Bend and Hoisington districts of the Central Kansas and Colorado divisions, succeeding **G. W. Raney**, who has been granted a leave of absence.

**Lester R. Knott**, assistant to the chairman of the General committee of the Transportation division, Operations and Maintenance department, Association of American Railroads, has been appointed secretary of the Transportation division, with offices as before at Chicago, succeeding **George W. Covert**, whose death is noted elsewhere in these columns. Mr. Knott was born on June 5, 1895, at Washington, D. C., and entered railway service in June, 1910, as a telegraph messenger on the Southern. In September, 1917, Mr. Knott left this company to go with the American Railway Association, and later served with the United States Railroad Administration as a general clerk in the Division of Operation at Washington. Since March, 1920, he has been with the American Railway Association and its successor, the Association of American Railroads, serving in the Chicago office suc-

cessively as assistant chief clerk, chief clerk and, for the last five years, assistant to the chairman of the General committee of the Transportation division.

## TRAFFIC

**Melville E. Ingalls** has been appointed general agent for the New York Central System, with headquarters at Peoria, Ill., succeeding **W. M. Snow**, promoted.

**O. R. Smith** has been appointed assistant general freight agent of the St. Louis Southwestern, with headquarters at Tyler, Texas, succeeding **H. N. Roberts**, who has resigned to accept a position as chairman of the Texas-Louisiana Freight Bureau.

**Francis E. Pennington**, who has been appointed general freight agent of the Missouri Pacific, with headquarters at St. Louis, Mo., as noted in the *Railway Age* of March 7, has been in railway service for 20 years. He was born on August 15, 1895, at Marvin, Tenn., and attended various colleges in that state. He entered railway service on February 20, 1916, as a ticket seller on the Southern at Bulls Gap, Tenn., serving in this position at various points on this road until December 1, 1921, when he was made traveling passenger agent at Chattanooga, Tenn. In



Francis E. Pennington

the following year Mr. Pennington left the service of the Southern to go with the Missouri Pacific as traveling passenger agent at Birmingham, Ala., being transferred to Memphis, Tenn., on October 10, 1927. He was appointed division passenger agent with the same headquarters on February 1, 1929, and on May 1 of the same year he was made general agent for the Missouri Pacific Lines at Washington, D. C., being transferred to Pittsburgh, Pa., on October 15, 1934. He was located at the latter point at the time of his recent appointment as general freight agent, which was effective on March 1.

## ENGINEERING AND SIGNALING

**V. R. Hayes**, division engineer of the Wabash at Decatur, Ill., has been promoted to engineer of track, a newly created posi-

tion, with headquarters at St. Louis, Mo. **C. T. Warren**, division engineer of the Ann Arbor (a subsidiary of the Wabash), with headquarters at Owosso, Mich., has been transferred to Decatur to replace Mr. Hayes. **B. M. Bennett**, supervisor of track of the Ann Arbor, with headquarters at Owosso, has been promoted to division engineer, replacing Mr. Warren. These changes became effective on March 10. The position of assistant chief engineer of the Wabash, which was held by **J. J. Baxter** until his death on February 20 (noted in *Railway Age* for February 29), has been abolished.

## SPECIAL

**Dr. Ralph M. Dodson** has been appointed chief surgeon, Hospital department, of the Northwestern district of the Union Pacific, with headquarters at Portland, Ore., to succeed **Dr. Donald H. Jessop**, who has retired in accordance with the provisions of this company's pension system.

## OBITUARY

**Samuel J. Holt**, division engineer of the Mississippi division of the Illinois Central, with headquarters at Water Valley, Miss., died on March 7 at Fulton, Ky., of a heart attack.

**Lambert N. Hopkins**, who retired in 1928 as purchasing agent of the Chicago, Burlington & Quincy, died at his home at Santa Barbara, Calif., on March 17 at the age of 84 years.

**H. B. Johnson**, former controller of the Southern Pacific, died at his home in Hollis, N. Y., on March 11. In 1932, on account of ill health, Mr. Johnson asked to be relieved of his duties as controller and was appointed accountant advisor in the law department, in which position he was serving at the time of his death.

**George W. Covert**, secretary of the Transportation division, Operations and Maintenance department, Association of American Railroads, with headquarters at Chicago, died in that city on March 8 after a brief illness. Mr. Covert was born at Pittsburgh, Pa., on February 4, 1869. He entered the accounting department of the Chicago, Burlington & Quincy at Lincoln, Neb., on February 1, 1888, and served in various clerical capacities continuously until 1897, when he was made chief clerk of the department. In 1903 he was made chief clerk to the superintendent of car service at Lincoln; in 1905, chief clerk to the assistant superintendent of transportation at Omaha, and in 1909, assistant superintendent of transportation. He held the latter position until 1917, when he entered the employ of the United States Railroad Administration at Chicago and Washington, with which organization he remained until September, 1919. At the end of federal control he became secretary of the Transportation division, American Railway Association (now Association of American Railroads), which position he held until his death.